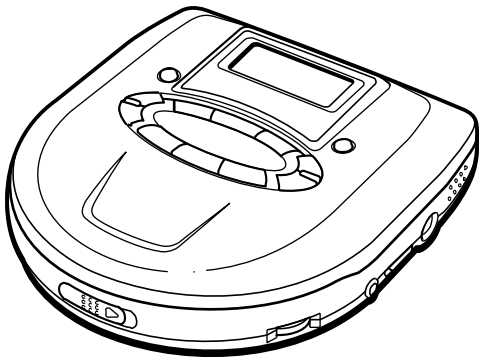
aiwa SERVICE

XP-MP3 AU, AEZ



SERVICE MANUAL

COMPACT DISC PLAYER

BASIC CD MECHANISM : DA23LN

aiwa

S/M Code No. 09-00A-350-5N2

DATA

SPECIFICATION <AU>

Tracking system	3-beam laser
Laser pickup	Semiconductor laser
D/A conversion	Multi-bit DAC
Frequency response	
	20 – 20,000 Hz (47 k ohms)
Output	/LINE OUT jack (stereo mini-jack)
Maximum output	12 mW + 12 mW (16 ohms at 1 kHz)
	500 mV (47 k ohms at 1 kHz)
Power supply	DC 3 V using two size AA (LR6) alkaline batteries
	DC 2.4 V using two commercially available (Ni-MH 1.2 V 1600mAh) rechargeable batteries
	AC house current using the supplied AC adaptor
Maximum outside	dimensions
	131 (W) × 35 (H) × 144 (D) mm (5 1/4 × 1 7/16 × 5 3/4 in.) (excluding projecting parts and controls)
Weight	Approx. 285 g (10 oz.) excluding batteries

«**AC Adaptor AC-A56U**»

Rated input	AC 120 V, 60 Hz

Car audio cassette adaptor

Frequency response	
	50 – 20,000 Hz (It may differ depending on type of your cassette car stereo.)
Cord length	1.5 m (4 ft 11 in.)
Dimensions	102.4 (W) × 12.1 (H) × 63.8 (D) mm (4 1/8 × 1/2 × 2 5/8 in.)
Weight	Approx. 41 g (1.4 oz.)

Car battery adaptor

Input voltage	DC 12 V/24 V
Output voltage	DC 6 V 300 mA
Cord length	1.5 m (4 ft 11 in.)
Weight	Approx. 53 g (1.9 oz.)

• Design and specifications are subject to change without notice.

SPECIFICATION <AEZ>

Tracking system	3-beam laser
Laser pickup	Semiconductor laser
D/A conversion	Multi-bit DAC
Frequency response	
	20 –20,000 Hz (47 k ohms)
Output	/LINE OUT jack (stereo mini-jack)
Maximum output	5 mW + 5 mW (16 ohms at 1 kHz)
	500 mV (47 k ohms at 1 kHz)
Power supply	DC 3 V using two LR6 (size AA) alkaline batteries
	DC 2.4 V using two commercially available (Ni-MH 1.2 V 1600mAh) rechargeable batteries
	AC house current using the supplied AC adaptor
Maximum outside	dimensions
	131 (W) x35 (H) x144 (D) mm (excluding projecting parts and controls)
Weight	Approx. 285 g excluding batteries

«**AC Adaptor AC-A56E**»

Rated input	AC 230 V, 50 Hz

Supplied headphones HP-M043

	Type: In-ear type
	Impedance: 16 ohms
	Sensitivity: 107 dB/mW

Recommended commercially available headphones

	Type: In-ear type/ Vertical type/Headband type
	Impedance: 16 –32 ohms
	Sensitivity: 100 –109 dB/mW

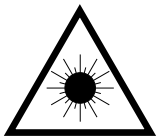
• Design and specifications are subject to change without notice.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynling laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

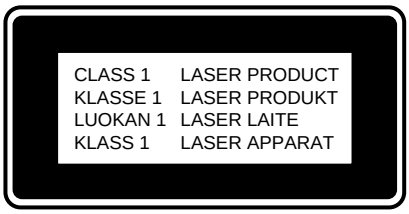
ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

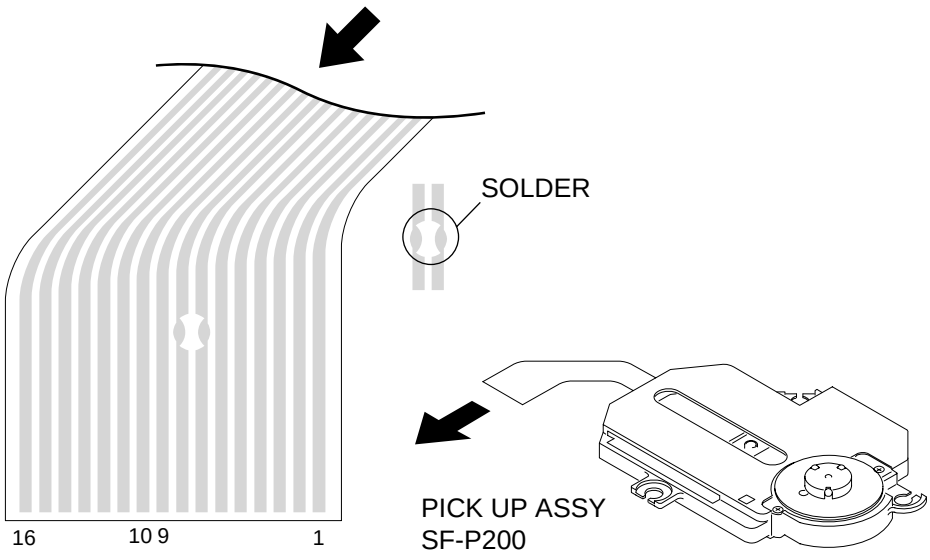
This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.



Precaution to replace optical block (SF-P200)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the right figure.



ACCESSORIES LIST

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-HP1-905-010		IB,EZ(6L)S<AEZ>
1	8A-HP1-901-010		IB,U(3L)S<AU>
2	87-B30-124-110		HEADPHONE,HP-M028<AU>
2	87-B30-265-010		HEADPHONE,HP-M043<AEZ>
⚠ 3	87-042-207-010		AC ADAPTOR,AC-A56 U<AU>
⚠ 3	87-042-210-210		AC ADAPTOR,AC-A56E<AEZ>
4	86-YK1-001-310		ADAPTOR,CAP-6<AU>
5	86-YK1-002-110		ADAPTOR,DC-602<AU>

ELECTRICAL MAIN PARTS LIST - 1/3

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	8A-HP1-607-010		C-IC,UPD784216AYGC-105-8EU
	87-A21-941-030		C-IC,UT62L1024LC-70LL
	87-A20-674-040		C-IC,S-80825ANNP-EDN
	87-A21-323-010		C-IC,CXD2585Q
	87-A21-703-040		C-IC,SN74LV244APW
	87-017-945-040		C-IC,NJM2112
	87-A20-963-040		C-IC,CXA1791N
	87-A21-484-010		C-IC,SM5904BF
	87-A21-083-040		C-IC,BH6508FS
	87-A21-082-040		C-IC,BA6655AFV
	87-A21-332-040		C-IC,MB3800PFV
	87-A21-143-080		C-IC,S8324A33MC-EON-T2
	87-A21-833-040		C-IC,S-81330HG-KB-T1
	87-017-853-040		C-IC,NJM2100V
	87-A21-621-010		C-IC,MAS3507D-G10
	87-A21-624-040		C-IC,SN74AHC1G08 DCK
	87-A21-599-010		C-IC,LC89513K
	87-A21-942-030		C-IC,T15L256A-70P
	87-A21-714-030		C-IC,DAC3550A-C2
	87-A21-357-040		C-IC,AK4352VT
	87-A21-085-040		C-IC,TA2120FN
TRANSISTOR			
	89-115-865-080		C-TR,2SA1586G
	87-026-409-080		C-TR,RN1302
	89-111-625-080		C-TR,2SA1162GR
	87-026-418-080		C-TR,RN1311
	87-026-429-040		C-TR,RN2311
	87-A30-336-040		C-TR,UMH4N
	87-A30-332-040		C-TR,CPH3106
	89-214-123-080		C-TR,2SB1412 R
	87-A30-333-040		C-TR,CPH3206
	87-026-415-040		C-TR,RN1308
	89-341-165-080		C-TR,2SC4116GR
DIODE			
	87-001-166-080		C-DIODE,1SS301
	87-A40-674-040		C-DIODE,HRC0202A
	87-A40-614-040		C-DIODE,SFPB-72
	87-A40-592-040		C-ZENER,HZM11NB2
	87-A40-180-040		C-DIODE,SB07-015C
	87-A40-674-080		C-DIODE,HRC0202A
MAIN C.B			
C0101	87-A11-241-080		C-CAP,TN 22-6.3 M F93 A
C0102	87-010-831-080		C-CAP,U 0.1-16 Z F
C0103	87-010-831-080		C-CAP,U 0.1-16 Z F
C0104	87-A10-463-080		C-CAP,U 0.47-10 Z F
C0105	87-012-274-080		C-CAP,U 1000P-50 K B
C0106	87-012-274-080		C-CAP,U 1000P-50 K B
C0108	87-012-274-080		C-CAP,U 1000P-50 K B
C0109	87-012-274-080		C-CAP,U 1000P-50 K B
C0110	87-012-274-080		C-CAP,U 1000P-50 K B
C0111	87-012-274-080		C-CAP,U 1000P-50 K B
C0112	87-012-274-080		C-CAP,U 1000P-50 K B
C0113	87-012-274-080		C-CAP,U 1000P-50 K B
C0121	87-010-831-080		C-CAP,U 0.1-16 Z F
C0201	87-016-558-080		C-CAP,TN 47-6.3 F93B
C0202	87-010-831-080		C-CAP,U 0.1-16 Z F
C0203	87-A11-241-080		C-CAP,TN 22-6.3 M F93 A
C0204	87-010-831-080		C-CAP,U 0.1-16 Z F
C0205	87-A10-827-080		C-CAP,U 0.47-6.3 K B
C0206	87-012-280-080		C-CAP,U 3300P-50 K B
C0207	87-012-280-080		C-CAP,U 3300P-50 K B
C0208	87-A10-504-080		C-CAP,U 0.047-16 K B
C0209	87-012-199-080		C-CAP,U 220P-50 J CH
C0210	87-A10-827-080		C-CAP,U 0.47-6.3 K B
C0211	87-010-831-080		C-CAP,U 0.1-16 Z F
C0212	87-012-174-080		C-CAP,U 12P-50 J CH
C0213	87-012-174-080		C-CAP,U 12P-50 J CH
C0214	87-010-831-080		C-CAP,U 0.1-16 Z F
C0215	87-012-172-080		C-CAP,U 10P-50 D CH
C0216	87-012-172-080		C-CAP,U 10P-50 D CH
C0221	87-012-270-080		C-CAP,U 470P-50 K B
C0222	87-012-270-080		C-CAP,U 470P-50 K B
C0223	87-012-270-080		C-CAP,U 470P-50 K B
C0224	87-012-270-080		C-CAP,U 470P-50 K B
C0225	87-012-270-080		C-CAP,U 470P-50 K B
C0226	87-012-270-080		C-CAP,U 470P-50 K B
C0241	87-010-831-080		C-CAP,U 0.1-16 Z F
C0242	87-010-831-080		C-CAP,U 0.1-16 Z F
C0251	87-016-558-080		C-CAP,TN 47-6.3 F93B
C0252	87-010-831-080		C-CAP,U 0.1-16 Z F
C0253	87-A11-241-080		C-CAP,TN 22-6.3 M F93 A
C0254	87-A11-241-080		C-CAP,TN 22-6.3 M F93 A
C0255	87-016-558-080		C-CAP,TN 47-6.3 F93B
C0256	87-A11-241-080		C-CAP,TN 22-6.3 M F93 A
C0257	87-012-274-080		C-CAP,U 1000P-50 K B
C0258	87-012-199-080		C-CAP,U 220P-50 J CH
C0259	87-010-831-080		C-CAP,U 0.1-16 Z F
C0260	87-012-199-080		C-CAP,U 220P-50 J CH
C0261	87-012-186-080		C-CAP,U 39P-50 J CH
C0262	87-012-180-080		C-CAP,U 22P-50 J CH
C0271	87-010-831-080		C-CAP,U 0.1-16 Z F
C0272	87-010-831-080		C-CAP,U 0.1-16 Z F
C0301	87-A11-241-080		C-CAP,TN 22-6.3 M F93 A
C0302	87-010-831-080		C-CAP,U 0.1-16 Z F
C0303	87-010-831-080		C-CAP,U 0.1-16 Z F
C0401	87-010-831-080		C-CAP,U 0.1-16 Z F
C0402	87-016-558-080		C-CAP,TN 47-6.3 F93B
C0403	87-012-273-080		C-CAP,U 820P-50 K B
C0404	87-010-785-080		C-CAP,U 0.015-25 K B GRM
C0405	87-010-785-080		C-CAP,U 0.015-25 K B GRM
C0406	87-010-785-080		C-CAP,U 0.015-25 K B GRM
C0407	87-010-785-080		C-CAP,U 0.015-25 K B GRM
C0408	87-012-286-080		C-CAP,U 0.01-25 K B
C0409	87-A10-827-080		C-CAP,U 0.47-6.3 K B
C0410	87-010-831-080		C-CAP,U 0.1-16 Z F
C0501	87-A11-031-080		C-CAP,E 100-16 M WX
C0502	87-010-831-080		C-CAP,U 0.1-16 Z F
C0503	87-A11-031-080		C-CAP,E 100-16 M WX
C0504	87-010-831-080		C-CAP,U 0.1-16 Z F
C0505	87-016-558-080		C-CAP,TN 47-6.3 F93B
C0506	83-HC3-635-080		C-CAP,E 220-6.3WF
C0507	87-010-831-080		C-CAP,U 0.1-16 Z F
C0508	87-A11-241-080		C-CAP,TN 22-6.3 M F93 A
C0509	87-016-558-080		C-CAP,TN 47-6.3 F93B
C0511	87-010-831-080		C-CAP,U 0.1-16 Z F
C0512	87-012-195-080		C-CAP,U 100P-50 J CH
C0513	87-012-286-080		C-CAP,U 0.01-25 K B
C0514	87-012-274-080		C-CAP,U 1000P-50 K B
C0515	87-010-831-080		C-CAP,U 0.1-16 Z F
C0516	87-010-831-080		C-CAP,U 0.1-16 Z F
C0517	87-010-831-080		C-CAP,U 0.1-16 Z F
C0518	87-010-831-080		C-CAP,U 0.1-16 Z F
C0519	87-010-831-080		C-CAP,U 0.1-16 Z F
C0531	87-016-558-080		C-CAP,TN 47-6.3 F93B
C0532	87-012-188-080		C-CAP,U 47P-50 J CH
C0533	87-A10-262-080		C-CAP,U 1-10 Z F
C0534	83-HC3-635-080		C-CAP,E 220-6.3WF
C0535	87-010-831-080		C-CAP,U 0.1-16 Z F
C0536	87-A11-241-080		C-CAP,TN 22-6.3 M F93 A
C0537	87-010-831-080		C-CAP,U 0.1-16 Z F
C0538	87-A10-463-080		C-CAP,U 0.47-10 Z F

ELECTRICAL MAIN PARTS LIST - 2/3

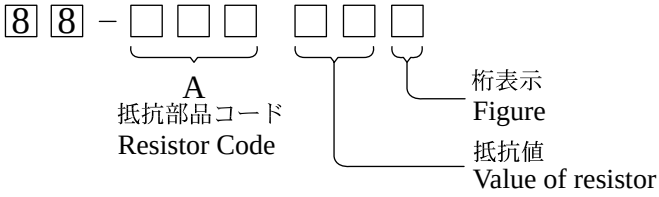
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C0539	87-010-831-080		C-CAP,U 0.1-16 Z F
C0540	87-010-831-080		C-CAP,U 0.1-16 Z F
C0541	87-012-274-080		C-CAP,U 1000P-50 K B
C0551	87-A11-793-080		C-CAP,TN 33-10 M F93 B
C0552	87-010-831-080		C-CAP,U 0.1-16 Z F
C0553	87-A10-262-080		C-CAP,U 1-10 Z F
C0554	87-A10-262-080		C-CAP,U 1-10 Z F
C0571	87-A10-262-080		C-CAP,U 1-10 Z F
C0572	87-A11-793-080		C-CAP,TN 33-10 M F93 B
C0573	87-012-286-080		C-CAP,U 0.01-25 K B
C0581	87-012-274-080		C-CAP,U 1000P-50 K B
C0582	87-010-831-080		C-CAP,U 0.1-16 Z F
C0583	87-012-286-080		C-CAP,U 0.01-25 K B
C0584	87-010-831-080		C-CAP,U 0.1-16 Z F
C0601	87-016-558-080		C-CAP,TN 47-6.3 F93B
C0602	87-010-831-080		C-CAP,U 0.1-16 Z F
C0603	87-010-831-080		C-CAP,U 0.1-16 Z F
C0604	87-010-831-080		C-CAP,U 0.1-16 Z F
C0621	87-010-831-080		C-CAP,U 0.1-16 Z F
C0651	87-016-558-080		C-CAP,TN 47-6.3 F93B
C0652	87-010-831-080		C-CAP,U 0.1-16 Z F
C0653	87-010-831-080		C-CAP,U 0.1-16 Z F
C0654	87-010-831-080		C-CAP,U 0.1-16 Z F
C0655	87-010-831-080		C-CAP,U 0.1-16 Z F
C0661	87-010-831-080		C-CAP,U 0.1-16 Z F
C0701	87-016-558-080		C-CAP,TN 47-6.3 F93B
C0702	87-010-831-080		C-CAP,U 0.1-16 Z F
C0703	87-016-287-080		C-CAP,TN 3.3-6.3 M
C0704	87-012-286-080		C-CAP,U 0.01-25 K B
C0705	87-010-831-080		C-CAP,U 0.1-16 Z F
C0706	87-A11-241-080		C-CAP,TN 22-6.3 M F93 A
C0707	87-012-178-080		C-CAP,U 18P-50 J CH
C0708	87-012-178-080		C-CAP,U 18P-50 J CH
C0709	87-010-831-080		C-CAP,U 0.1-16 Z F
C0710	87-010-831-080		C-CAP,U 0.1-16 Z F
C0711	87-010-831-080		C-CAP,U 0.1-16 Z F
C0721	87-012-271-080		C-CAP,U 560P-50 K B
C0722	87-012-271-080		C-CAP,U 560P-50 K B
C0723	87-012-335-080		C-CAP,U 270P-50 J SL
C0724	87-012-335-080		C-CAP,U 270P-50 J SL
C0725	87-012-193-080		C-CAP,U 82P-50 J CH
C0726	87-012-193-080		C-CAP,U 82P-50 J CH
C0751	87-A11-241-080		C-CAP,TN 22-6.3 M F93 A
C0752	87-010-831-080		C-CAP,U 0.1-16 Z F
C0753	87-010-831-080		C-CAP,U 0.1-16 Z F
C0754	87-016-289-080		C-CAP,TN 10-6.3 M F93
C0755	87-016-289-080		C-CAP,TN 10-6.3 M F93
C0761	87-A10-262-080		C-CAP,U 1-10 Z F
C0762	87-A10-262-080		C-CAP,U 1-10 Z F
C0801	87-016-558-080		C-CAP,TN 47-6.3 F93B
C0802	87-010-831-080		C-CAP,U 0.1-16 Z F
C0803	87-010-831-080		C-CAP,U 0.1-16 Z F
C0804	87-016-289-080		C-CAP,TN 10-6.3 M F93
C0805	87-A10-262-080		C-CAP,U 1-10 Z F
C0806	87-016-558-080		C-CAP,TN 47-6.3 F93B
C0807	87-016-289-080		C-CAP,TN 10-6.3 M F93
C0809	87-A10-025-080		C-CAP,U 0.22-16 Z F
C0810	87-016-286-080		C-CAP,TN 2.2-6.3 M
C0821	87-A10-262-080		C-CAP,U 1-10 Z F
C0822	87-A10-262-080		C-CAP,U 1-10 Z F
C0831	87-010-831-080		C-CAP,U 0.1-16 Z F
C0832	87-010-831-080		C-CAP,U 0.1-16 Z F
C0833	87-016-431-080		C-CAP,E 220-4 M WX
C0834	87-016-431-080		C-CAP,E 220-4 M WX
C0835	87-012-274-080		C-CAP,U 1000P-50 K B
C0836	87-012-274-080		C-CAP,U 1000P-50 K B
CN0101	87-A60-892-080		C-CONN,20P V FLT-SM1-TB
CN0401	87-A61-305-080		C-CONN,16P H TOC-E
CN0402	87-099-522-080		C-CONN,6P V ZH-SM3
FFC0001	8A-HP1-606-010		FF-CABLE,20P 0.5 78MM

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
J0501	87-A61-447-010		JACK,DC DJ26B BLK 6
J0801	87-A61-446-010		JACK,3.5 GRN ST W/REM
L0101	87-A50-367-080		C-COIL, 10UH LQG21F
L0201	87-A50-439-080		C-COIL, 47UH K LQH3C34
L0251	87-A50-367-080		C-COIL, 10UH LQG21F
L0252	87-A50-367-080		C-COIL, 10UH LQG21F
L0301	87-A50-367-080		C-COIL, 10UH LQG21F
L0501	87-A50-587-080		C-COIL,68UH-CDRH5D28
L0531	88-HC4-615-040		C-COIL,39UH 7006-2M
L0551	87-A50-587-080		C-COIL,68UH-CDRH5D28
L0571	87-A50-440-080		C-COIL, 100UH K LQH3C34
L0601	87-A50-536-080		C-COIL,10UH K LQH3C24
L0651	87-A50-536-080		C-COIL,10UH K LQH3C24
L0701	87-A50-536-080		C-COIL,10UH K LQH3C24
L0751	87-A50-367-080		C-COIL, 10UH LQG21F
R0271	87-022-241-080		C-RES,U 12K-1/16W F
R0272	87-022-241-080		C-RES,U 12K-1/16W F
R0273	87-022-241-080		C-RES,U 12K-1/16W F
R0274	87-022-241-080		C-RES,U 12K-1/16W F
R0275	87-022-233-080		C-RES,U 5.6K-1/16W F
R0276	87-022-233-080		C-RES,U 5.6K-1/16W F
R0277	87-022-436-080		C-RES,U 390-1/16W F
R0278	87-022-436-080		C-RES,U 390-1/16W F
R0279	87-022-221-080		C-RES,U 1.8K-1/16W F
R0280	87-022-221-080		C-RES,U 1.8K-1/16W F
R0281	87-022-229-080		C-RES,U 3.9K-1/16W F
R0282	87-022-229-080		C-RES,U 3.9K-1/16W F
R0283	87-022-253-080		C-RES,U 39K-1/16W F
R0284	87-022-253-080		C-RES,U 39K-1/16W F
R0508	87-022-239-080		C-RES,U 10K-1/16W F
R0509	87-022-247-080		C-RES,U 22K-1/16W F
R0534	87-022-284-080		C-RES,U 68K-1/16W F
R0535	87-022-239-080		C-RES,U 10K-1/16W F
S0101	87-036-264-080		C-SW,MICRO SPPB53
S0102	87-A90-703-080		C-SW,SL 1-1-3 SSSS813-B-2B
S0103	87-A90-330-080		C-SW,SL 1-1-2 SSSS81 T1.4
VR0801	87-A91-145-080		C-VR,RTRY 30KCX2 H RK14J12R
X0101	87-A70-266-080		C-VIB,CER 6.25MHZ CSTRC-MG05
X0201	87-A70-221-080		C-VIB,XTAL 16.9344MHZ CX-53F
X0701	87-A70-267-080		C-VIB,XTAL 14.725MHZ CX-53F
LID C.B			
C0901	87-016-289-080		C-CAP,TN 10-6.3 M F93
C0903	87-010-178-080		C-CAP,S 1000P-50 K B C2012
C0904	87-010-805-080		C-CAP,S 1-16 Z F
C0905	87-010-805-080		C-CAP,S 1-16 Z F
CN0901	87-A61-479-080		C-CONN,20P H 20FLZ-RSM1TB
LCD0901	8A-HP1-609-010		LCD,AHP-1
R0901	83-XM1-617-080		C-COIL,BK2125HM601
S0901	87-A90-232-080		C-SW,TACT SKQRAA
S0902	87-A90-232-080		C-SW,TACT SKQRAA
S0910	87-A90-232-080		C-SW,TACT SKQRAA
S0911	87-A90-232-080		C-SW,TACT SKQRAA
S0912	87-A90-232-080		C-SW,TACT SKQRAA
S0913	87-A90-232-080		C-SW,TACT SKQRAA
S0914	87-A90-232-080		C-SW,TACT SKQRAA
S0915	87-A90-232-080		C-SW,TACT SKQRAA
S0920	87-A90-232-080		C-SW,TACT SKQRAA
S0921	87-A90-232-080		C-SW,TACT SKQRAA
S0922	87-A90-232-080		C-SW,TACT SKQRAA

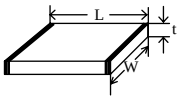
- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

Oチップ抵抗部品コード／CHIP RESISTOR PART CODE

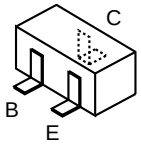
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



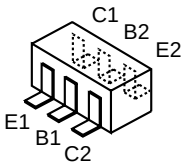
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード : A Resistor Code : A
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

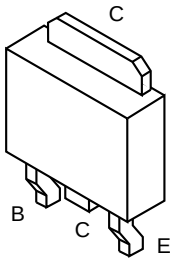
TRANSISTOR ILLUSTRATION



2SA1162
2SA1586
2SC4116
CPH3106
CPH3206
RN1302
RN1308
RN1311
RN2311

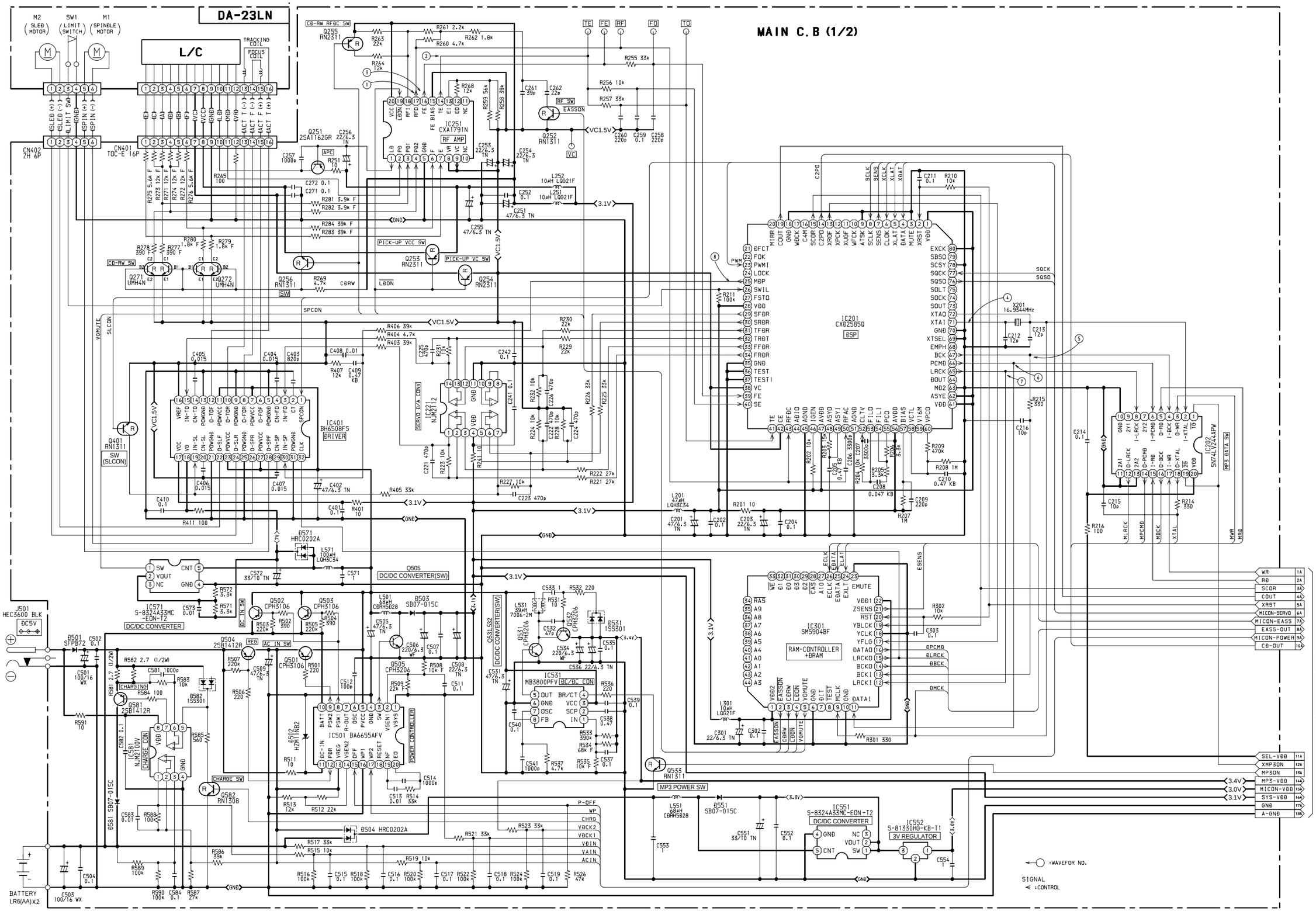


UMH4N

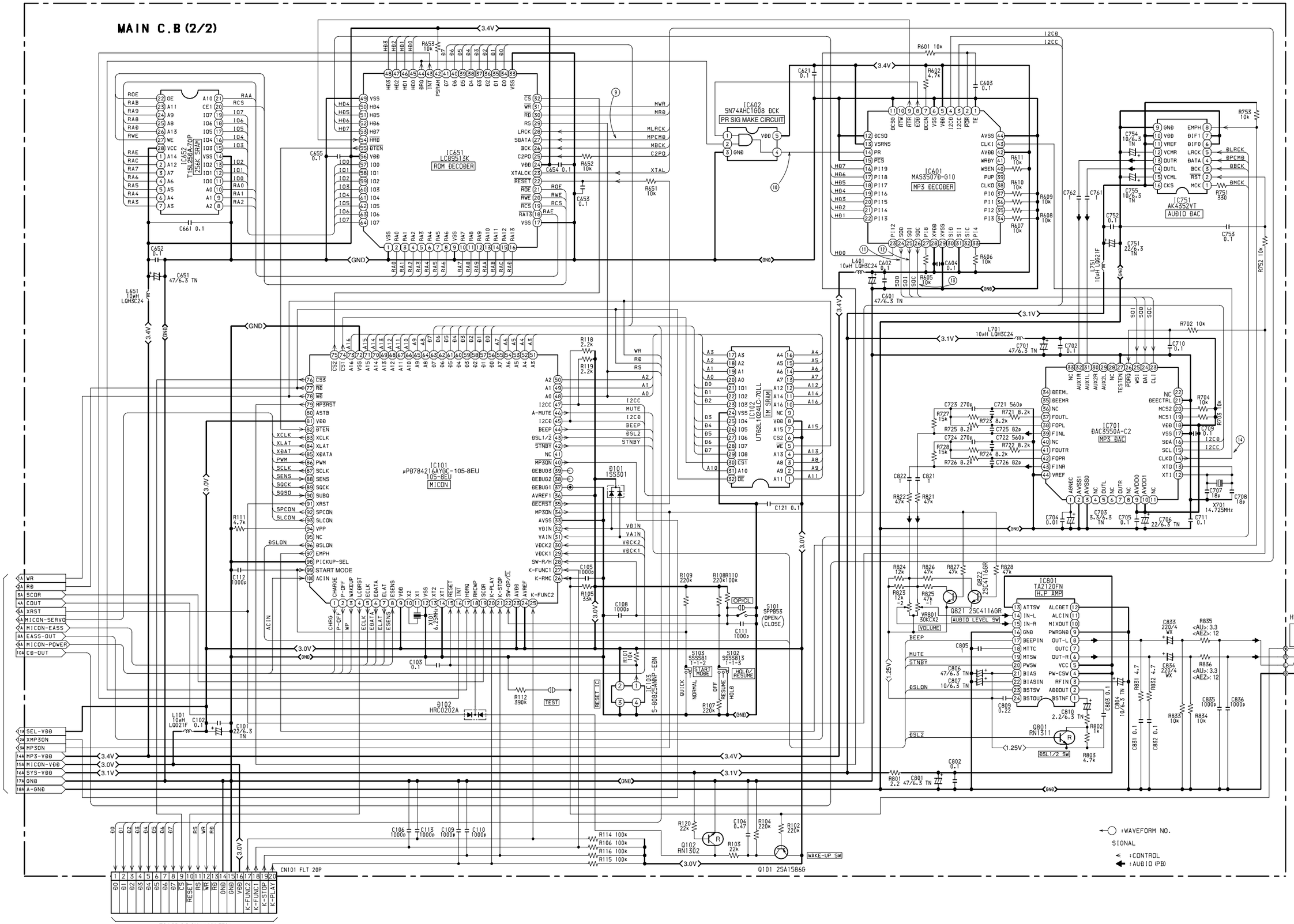


2SB1412

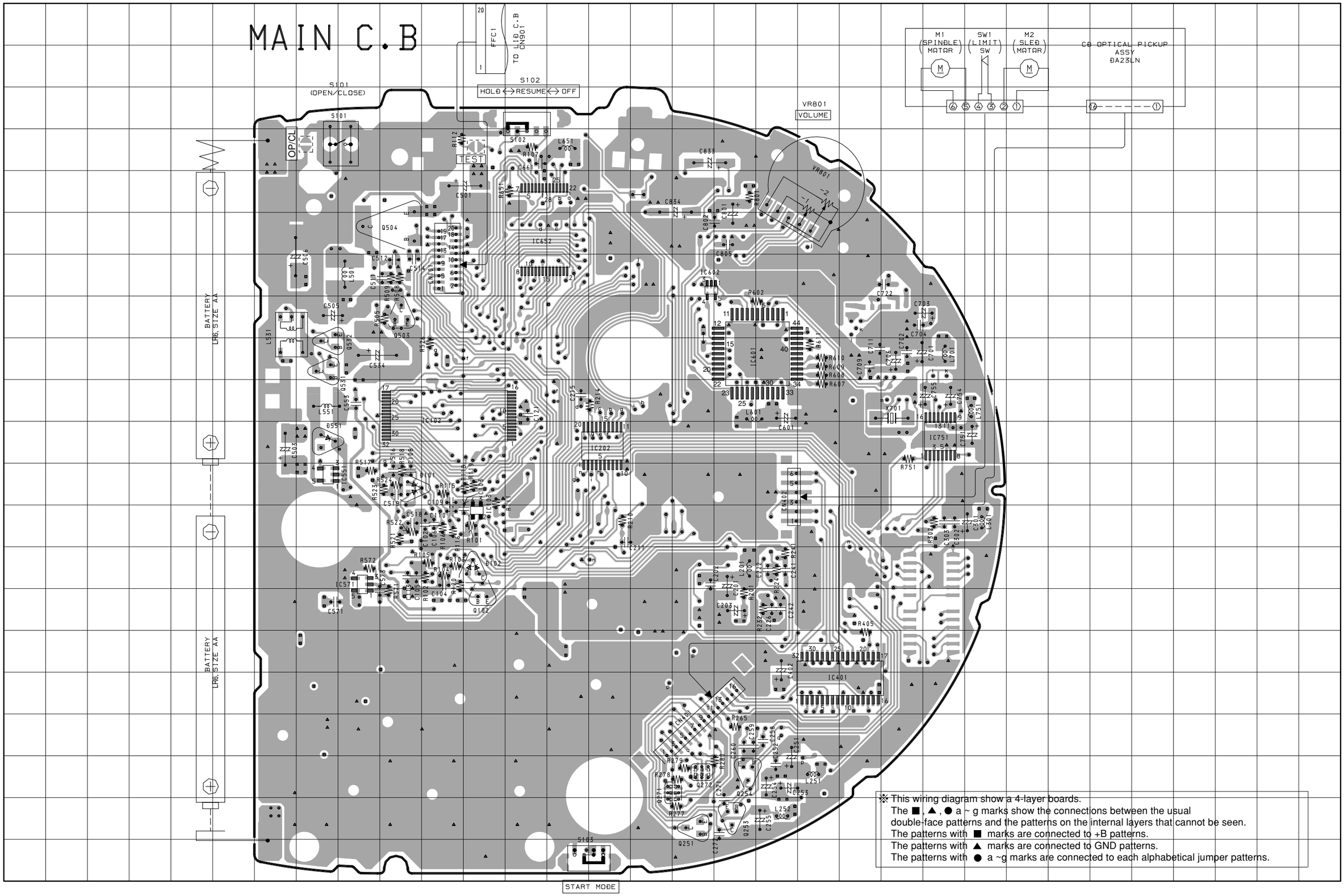
SCHEMATIC DIAGRAM - 1 (MAIN-1/2 SECTION)



SCHEMATIC DIAGRAM - 2 (MAIN-2/2 SECTION)

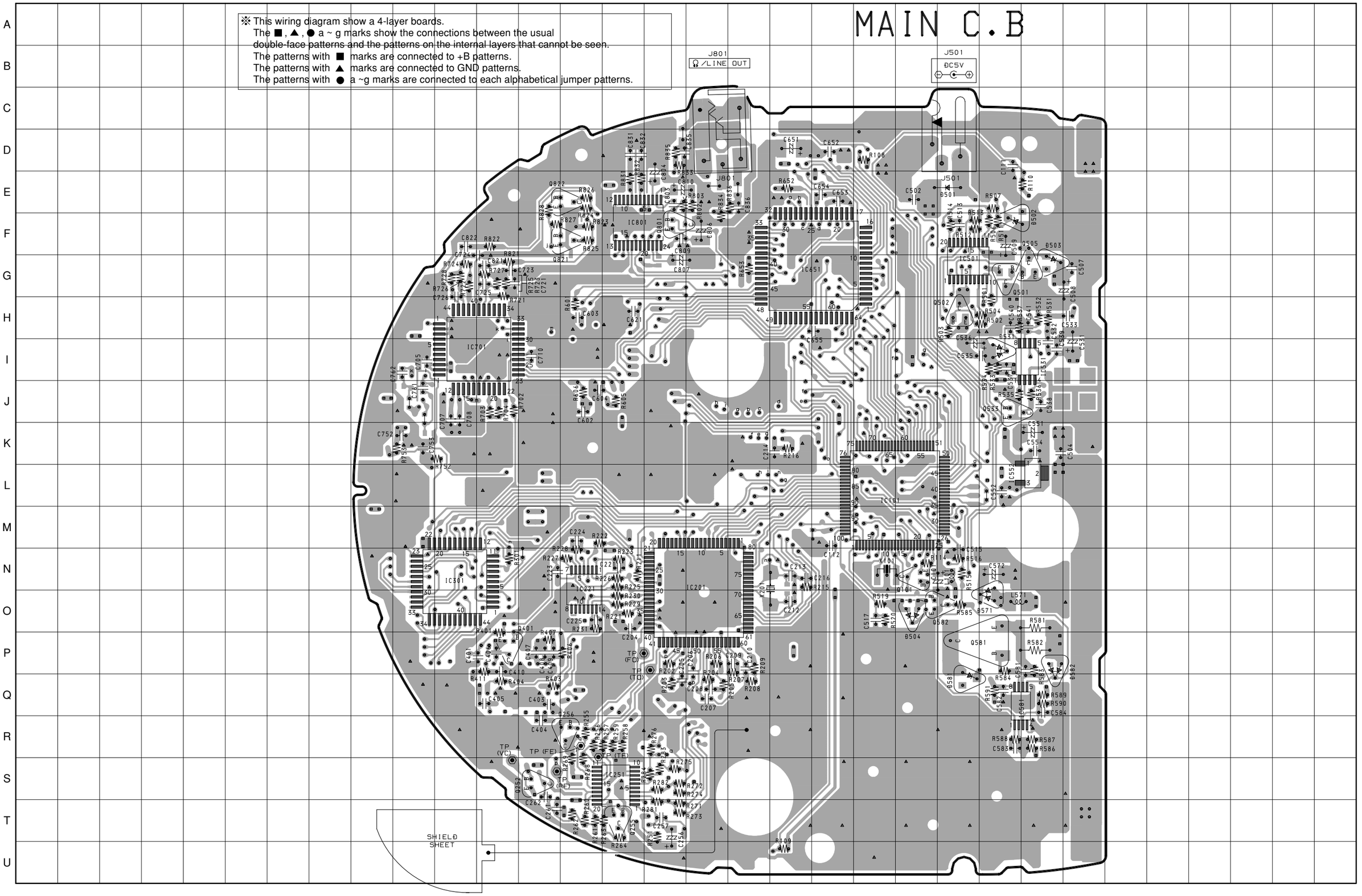


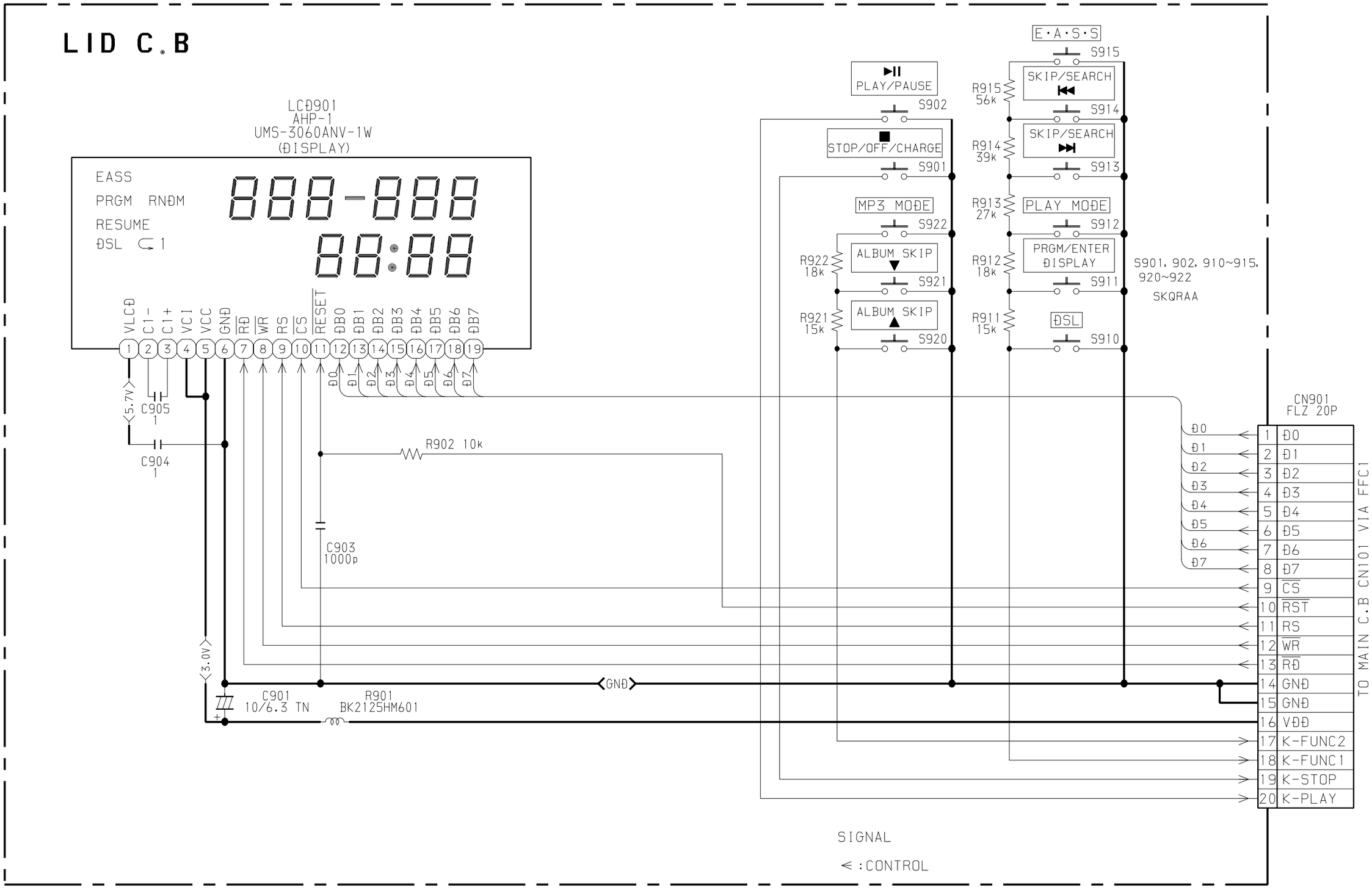
WIRING - 1 (MAIN C.B 1/2)

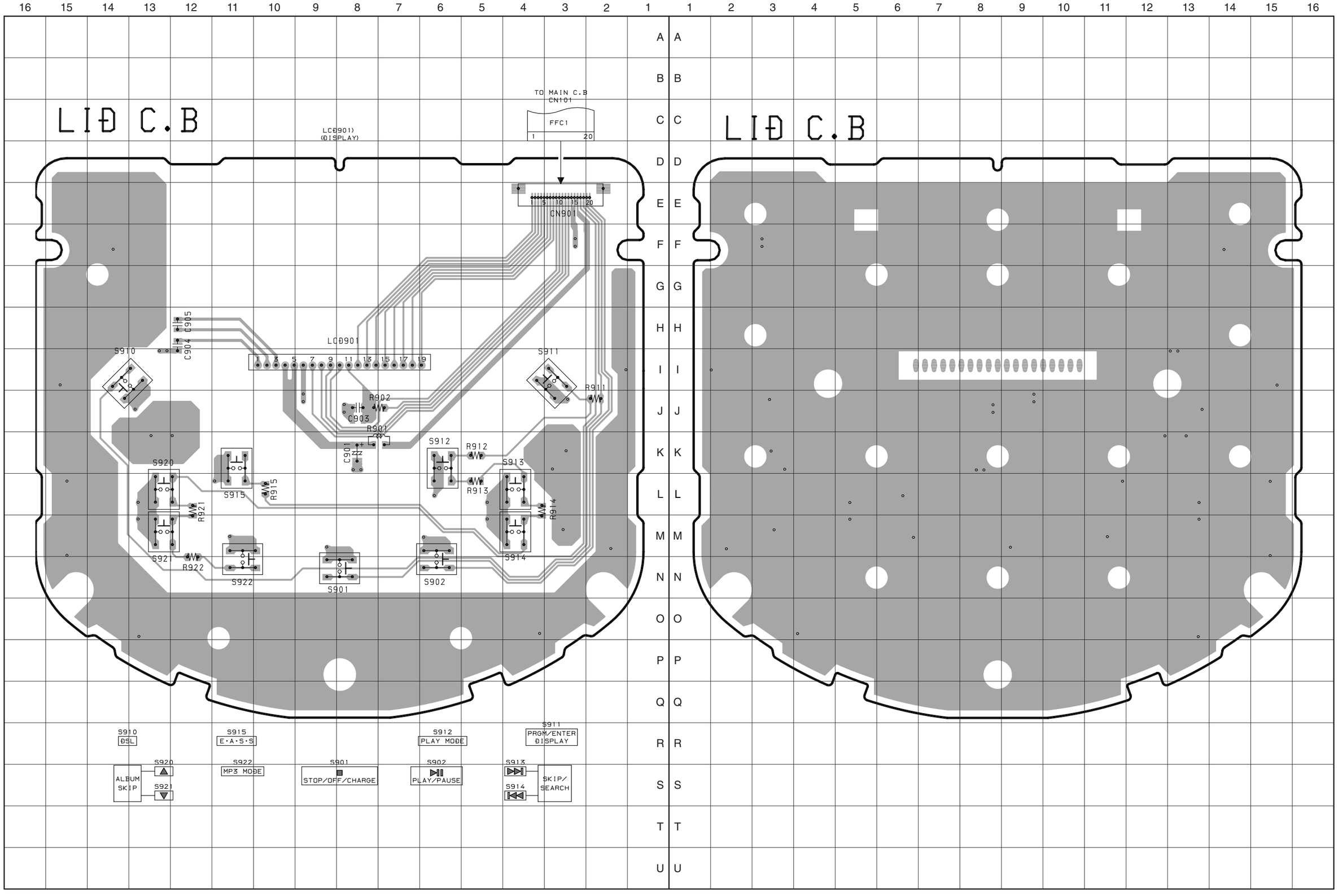

MAIN C.B
FFC1
TO LIB C.B CN901
S101 (OPEN/CLOSE)
S102 HOLD ↔ RESUME ↔ OFF
VR801 VOLUME
M1 (SPINDLE MOTOR)
SW1 (LIMIT SW)
M2 (SLED MOTOR)
CD OPTICAL PICKUP ASSY DA23LN
BATTERY LR6, SIZE AA
TEST
OP/CL
START MODE
QUICK START ↔ NORMAL
※ This wiring diagram show a 4-layer boards.
The ■, ▲, ● a ~ g marks show the connections between the usual double-face patterns and the patterns on the internal layers that cannot be seen.
The patterns with ■ marks are connected to +B patterns.
The patterns with ▲ marks are connected to GND patterns.
The patterns with ● a ~g marks are connected to each alphabetical jumper patterns.

WIRING - 1 (MAIN C.B 2/2)

※ This wiring diagram show a 4-layer boards.
The ■, ▲, ● a ~ g marks show the connections between the usual double-face patterns and the patterns on the internal layers that cannot be seen.
The patterns with ■ marks are connected to +B patterns.
The patterns with ▲ marks are connected to GND patterns.
The patterns with ● a ~g marks are connected to each alphabetical jumper patterns.

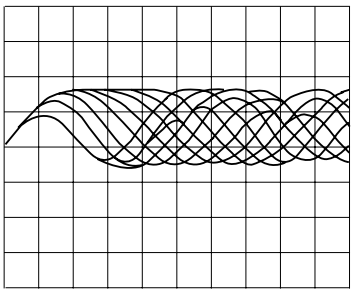



LID C.B
LCD901
AHP-1
UMS-3060ANV-1W
(DISPLAY)
EASS
PRGM RNDM
RESUME
DSL 1
VLCD C1- C1+ VC1 VCC GND RD WR RS CS RESET DB0 DB1 DB2 DB3 DB4 DB5 DB6 DB7
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
D0 D1 D2 D3 D4 D5 D6 D7
5.7V
C905 1
C904 1
R902 10k
C903 1000p
3.0V
C901 10/6.3 TN
R901 BK2125HM601
GND
PLAY/PAUSE S902
STOP/OFF/CHARGE S901
MP3 MODE S922
ALBUM SKIP S921
ALBUM SKIP S920
R922 18k
R921 15k
E·A·S·S S915
SKIP/SEARCH S914
SKIP/SEARCH S913
PLAY MODE S912
PRGM/ENTER DISPLAY S911
DSL S910
R915 56k
R914 39k
R913 27k
R912 18k
R911 15k
S901, 902, 910~915, 920~922 SKQRAA
CN901 FLZ 20P
D0 D1 D2 D3 D4 D5 D6 D7
1 D0
2 D1
3 D2
4 D3
5 D4
6 D5
7 D6
8 D7
9 CS
10 RST
11 RS
12 WR
13 RD
14 GND
15 GND
16 VDD
17 K-FUNC2
18 K-FUNC1
19 K-STOP
20 K-PLAY
TO MAIN C.B CN101 VIA FFC1
SIGNAL
< :CONTROL


LID C.B
LCD901)
(DISPLAY)
TO MAIN C.B
CN101
FFC1
1
20
CN901
1 5 10 15 20
LCD901
1 3 5 7 9 11 13 15 17 19
C904 C905
S910
S911
R911
R902
C903
R901
S912
R912
S913
R913
S914
R914
S920
S921
R921
R922
S922
S915
R915
C901
S901
S902
LID C.B
S910
DSL
S915
E·A·S·S
S912
PLAY MODE
S911
PRGM/ENTER
DISPLAY
S920
ALBUM
SKIP
S921
S922
MP3 MODE
S901
STOP/OFF/CHARGE
S902
PLAY/PAUSE
S913
S914
SKIP/
SEARCH

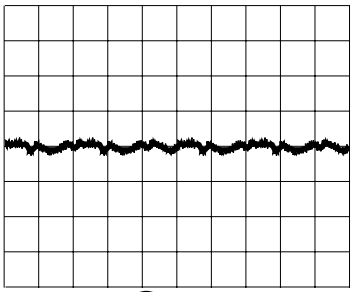
WAVEFORMS - 1/2

1



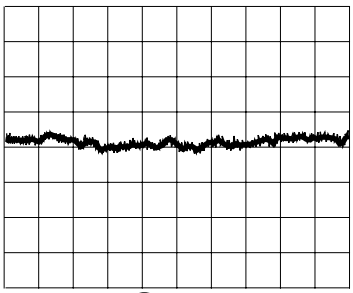
IC251 Pin 17 (RF O)
500mV/200ns DIV

2



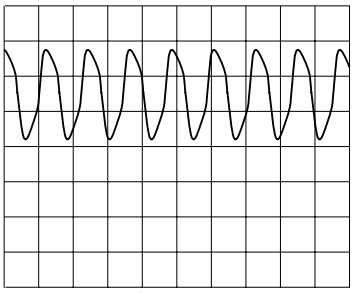
IC251 Pin 14 (TA O)
50mV/1ms DIV

3



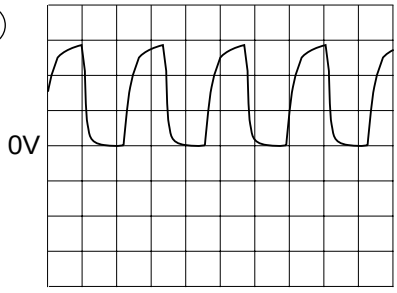
IC251 Pin 16 (FE O)
50mV/1ms DIV

4



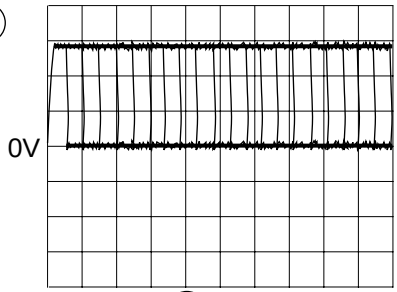
IC201 Pin 71 (XTAI)
1V/50ns DIV

5



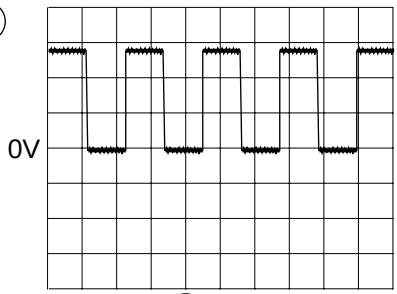
IC201 Pin 67 (BCK)
1V/200ns DIV

6



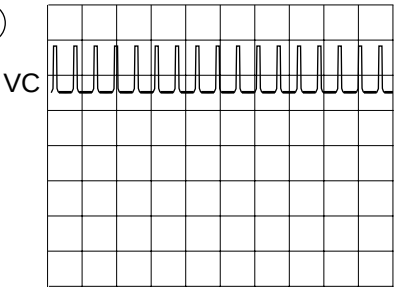
IC201 Pin 66 (PCMD)
1V/1µs DIV

7



IC201 Pin 65 (LRCK)
1V/10µs DIV

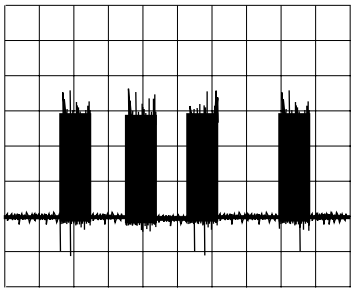
8



IC201 Pin 25 (MDP)
1V/100µs DIV

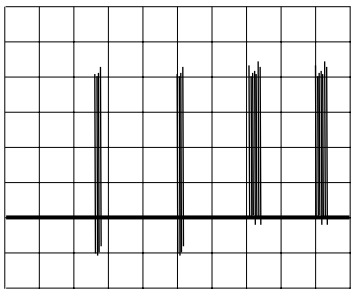
WAVEFORMS - 2/2

(9)



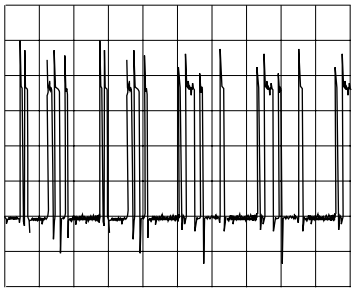
IC651 Pin (27) (SDATA)
1V/200ms DIV

(10)



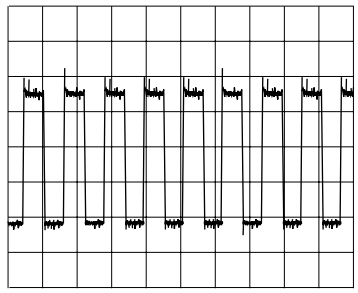
IC601 Pin (14) (PR)
1V/:50µs DIV

(11)



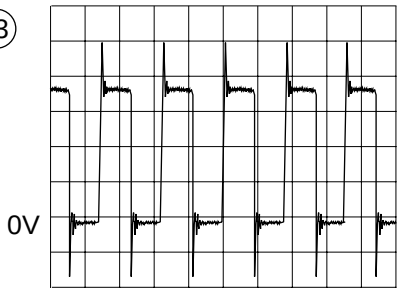
IC601 Pin (24) (SOD)
1V/:5µs DIV

(12)



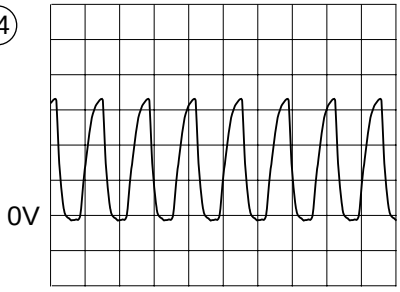
IC601 Pin (25) (SOI)
1V/20µs DIV

(13)



IC601 Pin (26) (SOC)
1V/200ns DIV

(14)



IC701 Pin (14) (CLKO) (14.725MHz)
1V/50ns DIV

TEST MODE - 1/2

The servo circuit in this model does not need adjustment: It is entirely controlled inside an IC.
Therefore, each time TOC is read, adjustment and disc detection will automatically be performed.
Do not use MP3 recorded discs in the test mode.

1. Starting Test Mode
   Short-circuit the OP/CL land using solder.
   Insert the DC plug while shorting the TEST land using tweezers, etc.
   If all LCD segments light, release the tweezers, etc.

All LCD segments light

2. Releasing Test Mode
   Disconnect the DC plug.
   Remove the solder form the OP/CL land.
   Insert the DC plug again, and make sure that the OPEN indicator lights in the LCD when the CD lid is open.

3. Focus Search (S-Curve) Check
   Press the STOP button when all LCD segments are lit: Focus search will be repeated.
   If disc is on the turntable, S-curve can be checked.
   Press the STOP button to stop focus search.

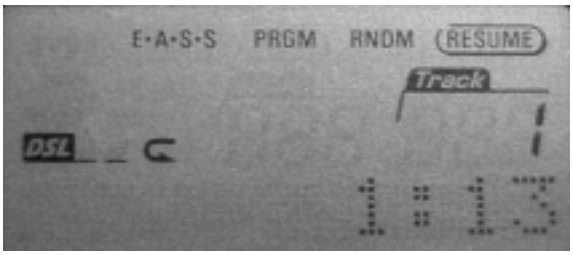
4. Sled Operation Check
   Press the FS button when all LCD segments are lit to move the pickup to outer circumferences: Press the BS button to move it to inner circumferences.

5. Servo Operation Check
   Press the EASS button to turn EASS off. (If it remains ON, the disc may rotate at high speed.)
   (1) Tracking servo ON/OFF
      Press the PLAY button: Then, during playback of disc, press the MODE key once to turn tracking servo OFF: Press the MODE key again to turn tracking servo ON.

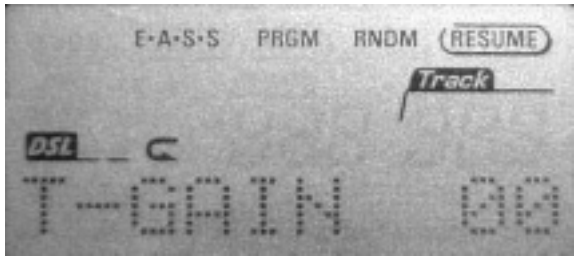
(2) Tracking balance/gain check

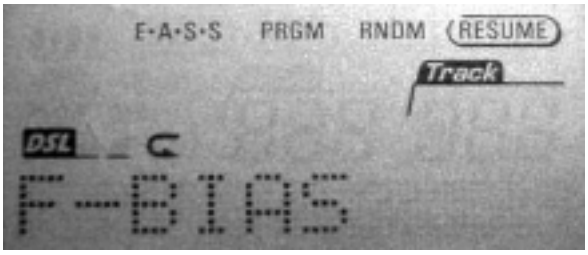
Press the PRGM button during playback of disc: The display in the LCD will switch from F-BIAS to T-BAL, T-GAIN, and to playback time.

Playback time display



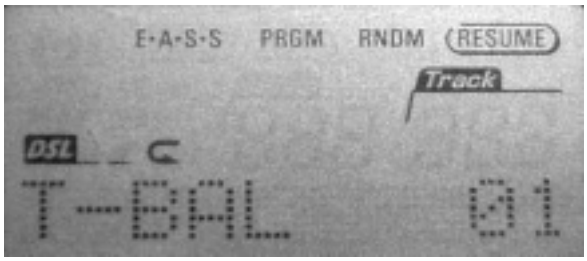
Tracking gain





Focus bias

(adjustment value is not displayed)



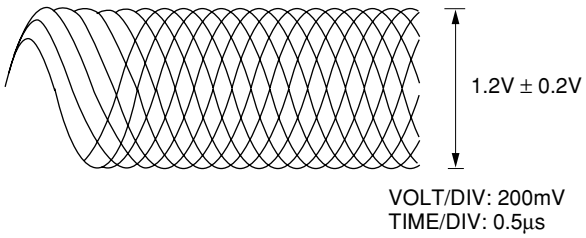
Tracking bias

* Caution: Since the adjustment values are determined inside the IC, they will vary depending on the disc: Only the displayed values will be checked for adjustment.

6. RF Level Check

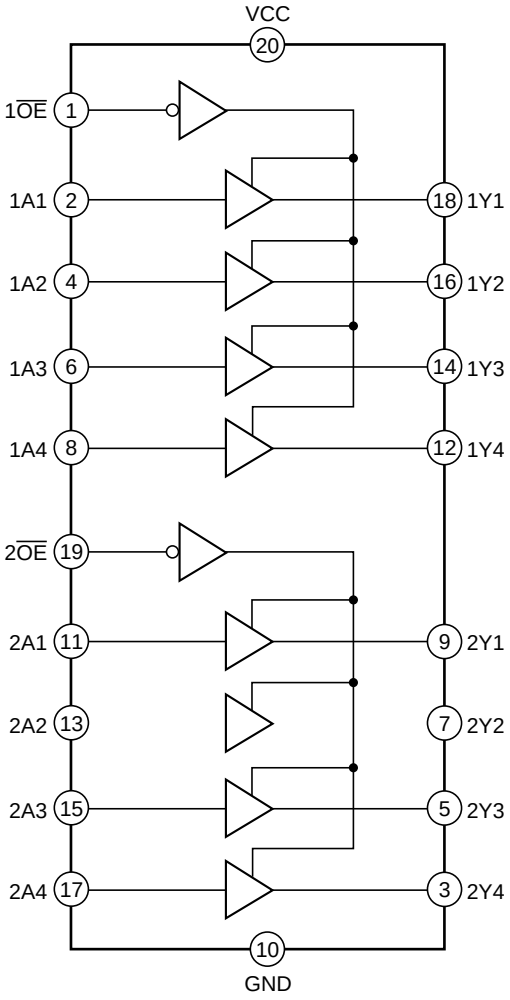
- Test point: Between RF and VC
- Test disc: TCD-782
- Turn EASS off for measurement.

Play the second track on CD to make sure that the RF waveform is clear and not clipped.



IC BLOCK DIAGRAM - 1/3

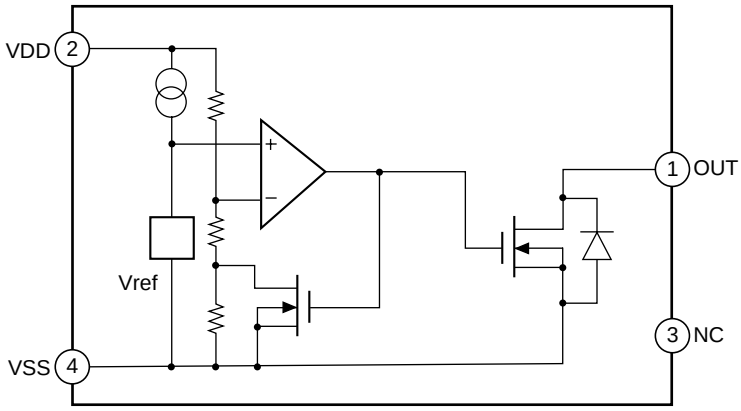
IC, SN74LV244APW



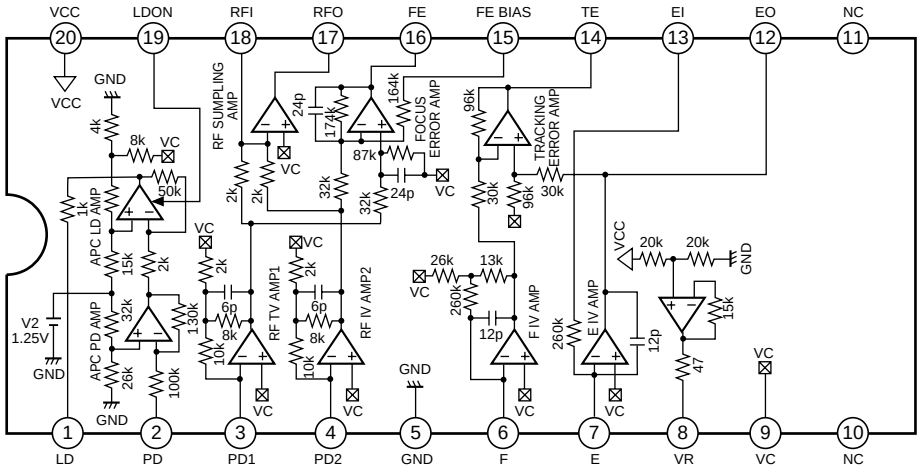
INPUTS		OUTPUT
$\overline{OE}$	A	Y
L	H	H
L	L	L
H	X	Z

H : Hight Level
L : Low Level
X : Unless specified
Z : Hight Impedance

IC, S-80825ANNP-EDN

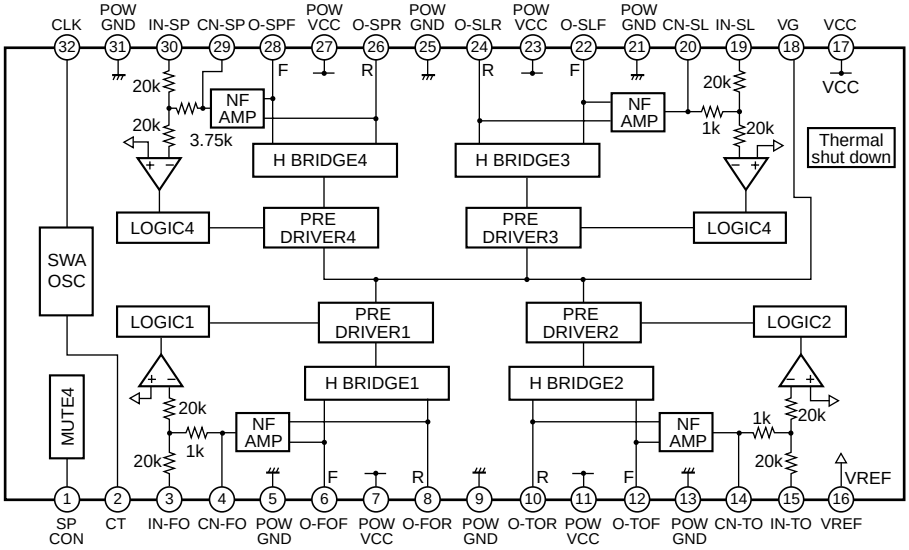


IC, CXA1791N

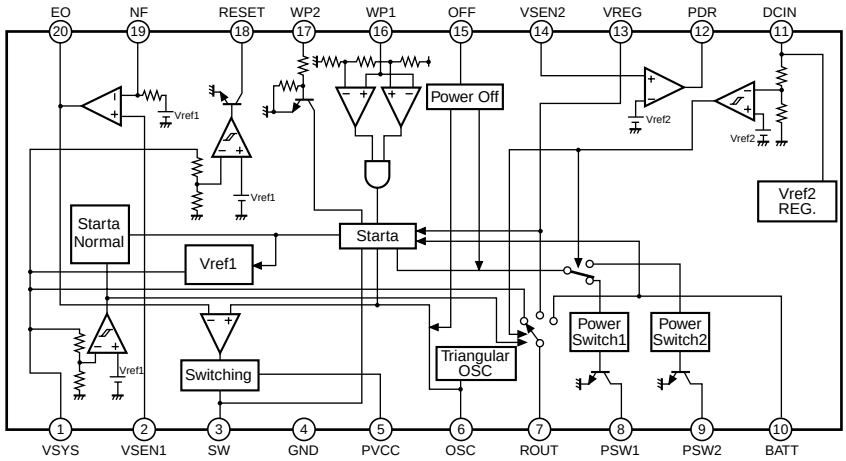


IC BLOCK DIAGRAM - 2/3

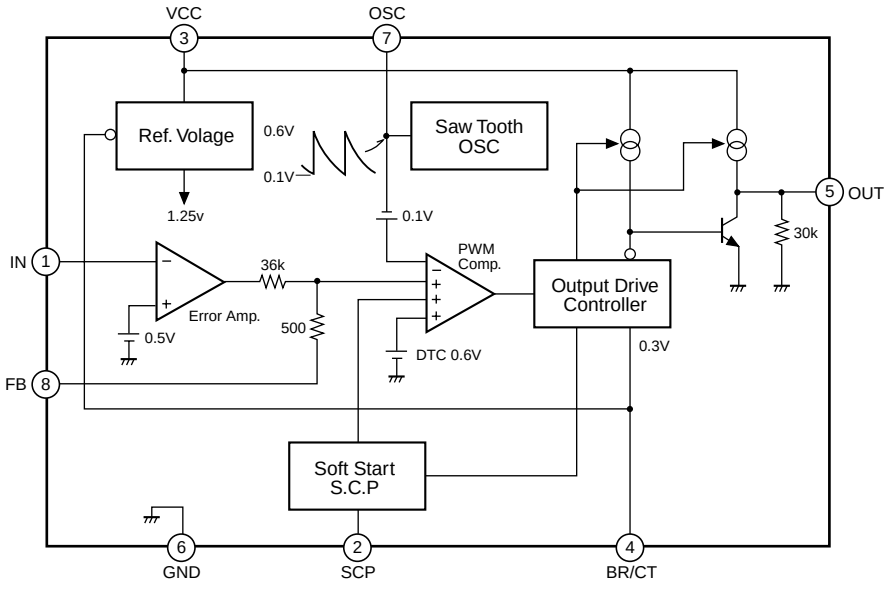
IC, BH6508FS



IC, BA6655AFV

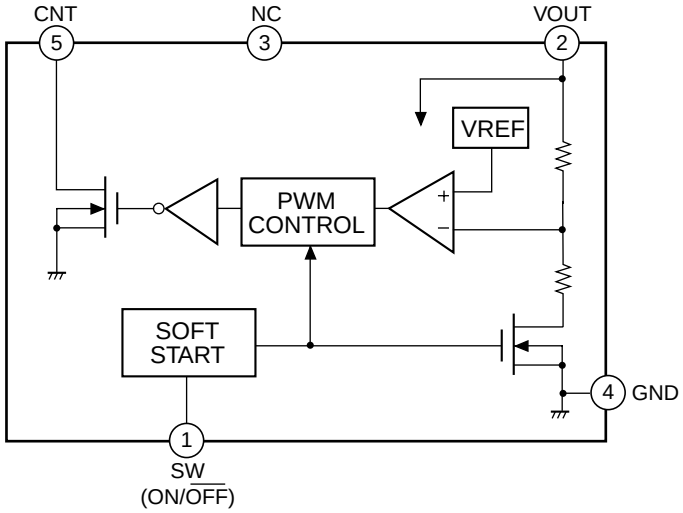


IC, MB3800PFV

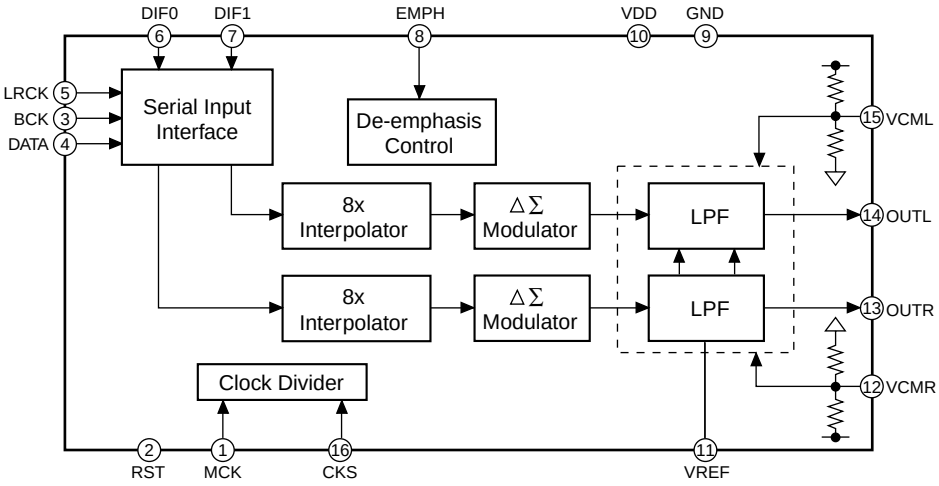


IC BLOCK DIAGRAM - 3/3

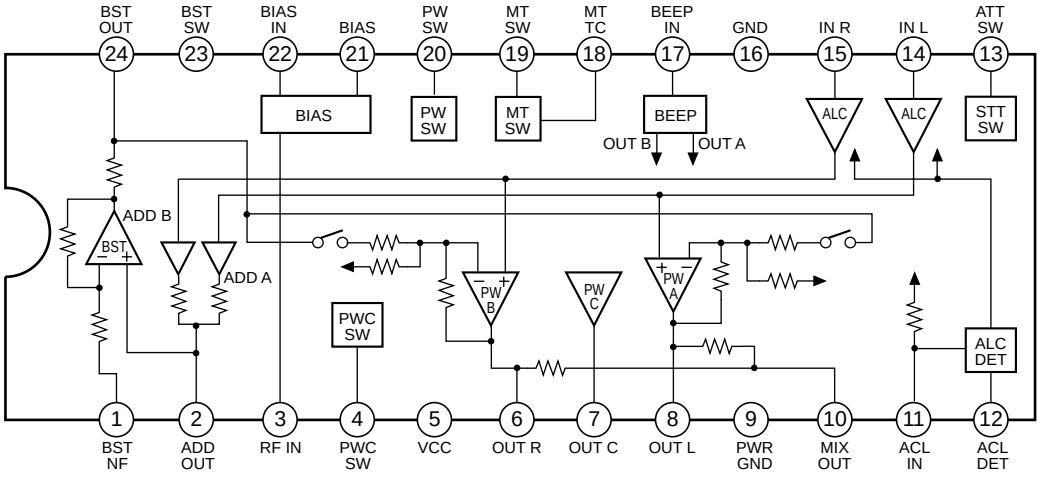
IC, S8324A33MC-EON-T2



IC, AK4352VT



IC, TA2120FN



IC DESCRIPTION - 1/6 (µPD784216AYGC-105-8EU) - 1/3

Pin No.	Pin Name	I/O	Description
1	CHARGE	O	Goes "H" to start charging.
2	P-OFF	O	Outputs one-shot "L" (approx. 50 ms) to turn off the CD system power.
3	WAKE UP	O	Outputs one-shot "H" (approx. 50 ms) to turn on the CD system power.
4	LCD RST	O	Reset output to LCD driver
5	ECLK	O	Clock output for transferring serial data to EASS controller
6	EDATA	O	Serial data output to EASS controller
7	ELAT	O	Serial data output latch to EASS controller
8	ESENS	I	SENS input from EASS controller
9	VDD	–	Power supply
10	X2	–	Clock pin
11	X1	I	Clock pin (6.25 MHz)
12	VSS	–	GND
13	XT2	–	Sub-clock pin
14	XT1	I	Sub-clock pin (not used and connected to GND)
15	$\overline{\text{RESET}}$	I	Reset input
16	$\overline{\text{INT}}$	I	Interrupt request input from ROM decoder
17	HDRG	I	DRG signal input from ROM decoder
18	RMCWP	I	Wakes up when remote control key is accepted ("H" is input when a key is pressed)
19	SCOR	I	SCOR input from DSP
20	K-PLAY	I	PLAY key input: The key is detected at "L". This also wakes up when the edge from "H" to "L" is detected in the sleep mode.
21	K-STOP	I	STOP key input: The key is detected at "L". This also wakes up when the edge from "H" to "L" is detected in the sleep mode.
22	SW-OP/$\overline{\text{CL}}$	I	Lid open/close detection. This also wakes up when the edge is detected ("H" -> "L" or "L" -> "H") in the sleep mode. "H" : OPEN, "L" : CLOSE.
23	AVDD	–	Power supply of A/D converter
24	AVREF	–	Reference power supply of A/D converter
25	K-FUNC2	I	Main-unit key A/D input 2 (see separate sheet)
26	K-RMC	I	Remote control key A/D input (see separate sheet)
27	K-FUNC1	I	Main-unit key A/D input (see separate sheet)
28	SW-R/H	I	RESUME, HOLD SW A/D input (see separate sheet)
29	VDCK1	I	CD system power voltage monitoring: Input when the voltage is 100/133=75.2%
30	VDCK2	I	MP3 system power voltage monitoring: Input when the voltage is 100/133=75.2%
31	VAIN	I	Battery voltage monitoring during charging (see separate sheet) Input when the voltage is 0-3.0 V x 90.9% (microprocessor input voltage), or 2.5-3.5 V (battery voltage).
32	VDIN	I	Input when the voltage is 75.2% of battery voltage monitoring pin (see separate sheet). The voltage input to this pin causes the battery remaining level display or "Lo-Batt" display.
33	AVSS	–	GND
34	MP3ON	O	MP3 power supply control. H": ON; "L": OFF

Pin No.	Pin Name	I/O	Description
35	DECRST	O	RESET output to ROM decoder
36	AVREF1	—	Connected to VDD since D/A converter is not used.
37	DEBUG1	I	For debugging ("L" when hyper terminal is not used)
38	DEBUG2	O	
39	DEBUG3	O	
40	$\overline{\text{MP3ON}}$	O	Data switching output. "H": CD-DA; "L": MP3
41	NC	—	Not used
42	$\overline{\text{STNBY}}$	O	Standby output to H.PAMP. "H": ON; "L": STANDBY
43	DSL1/$\overline{2}$	O	DSL1/2 switching output. "H": DSL1; "L": DSL2
44	BEEP	O	BEEP output to H.PAMP
45	I²CD	I/O	I²C DATA
46	A-MUTE	O	MUTE output to H.PAMP. "H": MUTE
47	I²CC	I/O	I²C CLOCK
48 ～ 55	A0 ～ A7	O	Address bus
56 ～ 63	D0 ～ D7	I/O	Data bus
64 ～ 71	A8 ～ A15	O	Address bus
72	VSS	—	GND
73	A16	O	Address bus
74	$\overline{\text{CS1}}$	O	CS output to external RAM
75	$\overline{\text{CS2}}$	O	CS output to ROM decoder
76	$\overline{\text{CS3}}$	O	CS output to LCD driver
77	$\overline{\text{RD}}$	O	Strobe signal output to external RAM and ROM decoder for reading
78	$\overline{\text{WD}}$	O	Strobe signal output to external RAM and ROM decoder for writing
79	$\overline{\text{MP3RST}}$	O	RESET output to MP3 decoder
80	ASTB	—	Not used
81	VDD	—	Power supply
82	$\overline{\text{DTEN}}$	I	Data enable input from ROM decoder
83	XCLK	O	Clock output for serial data transfer to DSP
84	XLAT	O	Latch output for serial data transfer to DSP
85	XDATA	O	Serial data output to DSP
86	PWM	O	PWM output for spindle rotation during EASS intermittent processing
87	SCLK	O	Clock output to DSP for reading SENS data
88	SENS	I	SENS data input from DSP
89	SQCK	O	Clock output to DSP for reading SUBQ
90	SUBQ	I	SUBQ data input from DSP
91	XRST	O	CD system reset output
92	SPCON	O	Spindle control pulse output
93	SLCON	O	Sled control pulse output
94	VPP	—	High voltage is applied to write data to flash memory
95	NC	—	Not used
96	DSLON	O	DSL ON/OFF output to H.PAMP. "H": ON; "L": OFF

Pin No.	Pin Name	I/O	Description
97	EMPH	O	EMPHASIS ON/OFF output to DAC. "H": ON; "L": OFF
98	PICKUP-SEL	I	Pickup select pin. "H": DA-23L; "L": DA-23LN
99	SW-EASS	I	MODE SW detection. "H": NORMAL; "L": QUICK.
100	ACIN	I	AC adapter input detection. "H": With input; "L": Without input.

IC, µPD784216AYGC-105-8EU A/D input set values: Reference voltages in ( ) with VDD 3.1 V

	K-FUNC1	K-FUNC2	SW-R/H		K-RMC
0 ~ 8H (0.00 V ~ 0.29 V)	DSL	F・F・S	RESUME/ HOLD	00H ~ 21H (0.00 V ~ 0.40 V)	
19 ~ 33H (0.30 V ~ 0.61 V)	PRGM	F・B・S		22H ~ 52H (0.41 V ~ 0.99 V)	F.S
34 ~ 51H (0.62 V ~ 0.98 V)	DISPLAY/ENTER (conventional MODE)	DISC/Album (MODE switching)		53H ~ 6FH (1.00 V ~ 1.36 V)	B.S
52 ~ 6FH (0.99 V ~ 1.34 V)	F.S		OFF	70H ~ 8CH (1.37 V ~ 1.70 V)	STOP
70 ~ 8DH (1.35 V ~ 1.70 V)	B.S			8DH ~ A9H (1.71 V ~ 2.05 V)	
8E ~ ABH (1.71 V ~ 2.07 V)	EASS			AAH ~ C7H (2.06 V ~ 2.40 V)	PLAY
AC ~ C9H (2.08 V ~ 2.43 V)			RESUME	C8H ~ E0H (2.41 V ~ 2.71 V)	DSL
CA ~ E7H (2.44 V ~ 2.79 V)				E1H ~ F5H (2.72 V ~ 2.96 V)	TEST
E8 ~ FFH (2.80 V ~ VDD)				F6H ~ FFH (2.97 V ~ VDD)	

Pin No.	Pin Name	I/O	Description
1	VDD2	–	input; "L": Without input
2	$\overline{\text{EASSON}}$	O	Power supply
3	CDRW	O	RF peaking SW switching output. "L": EASS ON
4	$\overline{\text{LDON}}$	O	CDRW SW switching output. "H": CD-RW mode
5	VGMUTE	O	Pickup laser ON/OFF switching output. "L": Laser ON
6	GND	–	Driver VG voltage ON/OFF switching output. "H": VG power ON
7	DIT	–	Connect to ground
8	$\overline{\text{TEST}}$	–	Not used
9	MCLK	I	
10	GND	–	16.9344MHz clock input
11	DATAI	I	Connect to ground
12	LRCKI	I	Audio serial data input
13	BCKI	I	Audio serial input (LR clock data)
14	BCKO	O	Audio serial input (bit clock data)
15	LRCKO	O	Audio serial output (bit clock data)
16	DATAO	O	Audio serial output (LR clock data)
17	YFLG	I	Audio serial data output
18	YCLK	I	IC process signal overflow flag RAM
19	YBLCK	I	Frame clock to crystal oscillator
20	$\overline{\text{RST}}$	I	Sub-code block clock signal
21	ESENS	O	System reset
22	VDD1	–	Microprocessor interface output
23	EMUTE	I	Power supply
24	ELAT	I	Focus muting
25	EDATA	I	Microprocessor interface latch clock input
26	ECLK	I	Microprocessor interface serial data input
27	A10	–	Microprocessor interface shift clock input
28	$\overline{\text{CAS}}$	O	Not used
29 ~ 32	D2, D3, D0, D1	I/O	D-RAM/CAS control output (not used)
33	$\overline{\text{WE}}$	O	D-RAM data inputs/outputs 2, 3, 0,1 (not used)
34	$\overline{\text{RAS}}$	O	D-RAM write inhibit control. "L": Write inhibited (not used)
35 ~ 40	A9 ~ A4	O	D-RAM/RAS control output (not used)
41 ~ 44	A0 ~ A3	O	D-RAM addresses 9-4 (not used)

Pin No.	Pin Name	I/O	Description
1	TE	I	Test enable
2	$\overline{\text{POR}}$	I	Reset, active “L”
3	12CC	I/O	I²C clock low
4	12CD	I/O	I²C data line
5	VDD	–	Positive supply for digital parts
6	VSS	–	Ground supply for digital parts
7	DCEN	I	Enable DC/DCconverter
8	$\overline{\text{EOD}}$	O	PIO end of DMA, active “L”
9	$\overline{\text{RTR}}$	O	PIO ready to read, active “L”
10	$\overline{\text{RTW}}$	O	PIO ready to write, active “L”
11	DCSG	–	DC converter transistor ground
12	DCSO	O	DC converter transistor open drain
13	VSENS	I	DC converter voltage sense
14	PR	I	PIO-DMA request or read/$\overline{\text{write}}$
15	$\overline{\text{PCS}}$	I	PIO chip select, active “L”
16	PI19	I/O	PIO data [19] 1. Demand pin in SDI mode 2. data bit [7], MSB (PIO-DMA input mode)
17	PI18	I/O	PIO data [18] 1. MPEG header bit 11-MPEG ID (SDI mode) 2. data bit [6] (PIO-DMA input mode)
18	PI17	I/O	PIO data [17] 1. MPEG header bit 12-MPEG ID (SDI mode) 2. data bit [5] (PIO-DMA input mode)
19	PI16	I/O	PIO data [16] 1. SIC, alternative input for SIC (SDI mode) 2. data bit [4] (PIO-DMA input mode)
20	PI15	I/O	PIO data [15] 1. SII, alternative input for SII (SDI mode) 2. data bit [3] (PIO-DMA input mode)
21	PI14	I/O	PIO data [14] 1. SID, alternative input for SID (SDI mode) 2. data bit [2] (PIO-DMA input mode)
22	PI13	I/O	PIO data [13] 1. MPEG header bit 13-Layer ID (SDI mode) 2. data bit [1] (PIO-DMA input mode)
23	PI12	I/O	PIO data [12] 1. MPEG header bit 14-Layer ID (SDI mode) 2. data bit [0] (PIO-DMA input mode)
24	SOD	O	Serial output data
25	SOI	O	Serial output frame identification
26	SOC	O	Serial output clock
27	P18	I/O	Start-up 1): clock output scaler ON/OFF, Operation 2): MPEG CRC error
28	XVDD	–	Positive supply of output buffers
29	XVSS	–	Ground of output buffers
30	SID	I	Serial input data
31	SII	I	Serial input frame identification
32	SIC	I	Serial input clock
33	PI4	I/O	Start-up 1): Select SDI/PIO-DMA input mode, Operation 2): MPEG frame sync

Pin No.	Pin Name	I/O	Description
34	PI3	I/O	Start-up 1): Enable layer 3/Disable layer 3 decoding, Operation 2): MPEG header bit 20 (Sampling frequency)
35	PI12	I/O	Start-up 1): Enable layer 2/Disable layer 2 decoding, Operation 2): MPEG header bit 21 (Sampling frequency)
36	PI11	I/O	Start-up 1): SDO: select 32-bit mode/16-bit I^2S mode Operation 2): MPEG header bit 30 (Emphasis)
37	PI10	I/O	Start-up 1): Select multimedia mode/broadcast mode, Operation 2): MPEG header bit 31 (Emphasis)
38	CLKO	O	Clock output for the D/A converter
39	PUP	O	Power up, i.e. status of voltage supervision
40	WSEN	I	Enable DSP and start DC/DC converter
41	WRDY	O	If WSEN = 0: valid clock input at CLKI. If WSEN = 1: clock syntehsizer PLL locked
42	AVDD	–	Supply for analog circuits
43	CLKI	I	Clock input
44	AVSS	–	Ground supply for analog circuits

Pin No.	Pin Name	I/O	Description
1	VSS	–	Ground
2 ~ 8	RA0 ~ RA6	O	Address signal outputs to data buffer RAM
9	VSS	–	Ground
10 ~ 16	RA7 ~ RA13	O	Address signal outputs to data buffer RAM
17	VSS	–	Ground
18	$\overline{\text{RA13}}$	O	Address signal output to data buffer RAM
19	$\overline{\text{RCS}}$	O	Chip select output to RAM
20	$\overline{\text{RWE}}$	O	Data write signal to RAM
21	$\overline{\text{ROE}}$	O	Data read signal from RAM
22	$\overline{\text{RESET}}$	I	Reset input. "L": Reset
23	XTALCK	I	Crystal oscillator circuit input
24	VDD	–	Power supply
25	C2PO	I	C2 pointer input
26	BCK	I	Clock for serial data input
27	SDATA	I	Serial data input
28	LRCK	I	44.1kHz strobe signal input
29	RS	I	Register select signal
30	$\overline{\text{RD}}$	I	CPU data read signal input
31	$\overline{\text{WR}}$	I	CPU data write signal input
32	$\overline{\text{CS}}$	I	Chip select signal input from CPU
33	VSS	–	Gournd
34 ~ 41	D0 ~ D7	I/O	CPU data signal pins. Pull-up resistors are incorporated.
42	PSRAM	I	Pseudo SRAM select pin
43	$\overline{\text{INT}}$	O	Interrupt request signal output to CPU
44	DRQ	O	DRQ signal output
45 ~ 48	HD0 ~ HD3	O	Data output to CPU
49	VSS	–	Ground
50 ~ 53	HD4 ~ HD7	O	Data output to CPU
54	$\overline{\text{HRD}}$	I	Data read signal input
55	$\overline{\text{DTEN}}$	O	Data enable signal output
56	VDD	–	Power supply
57 ~ 64	IO0 ~ IO7	I/O	Data buffer signal pins. Pull-up resistors are incorporated.

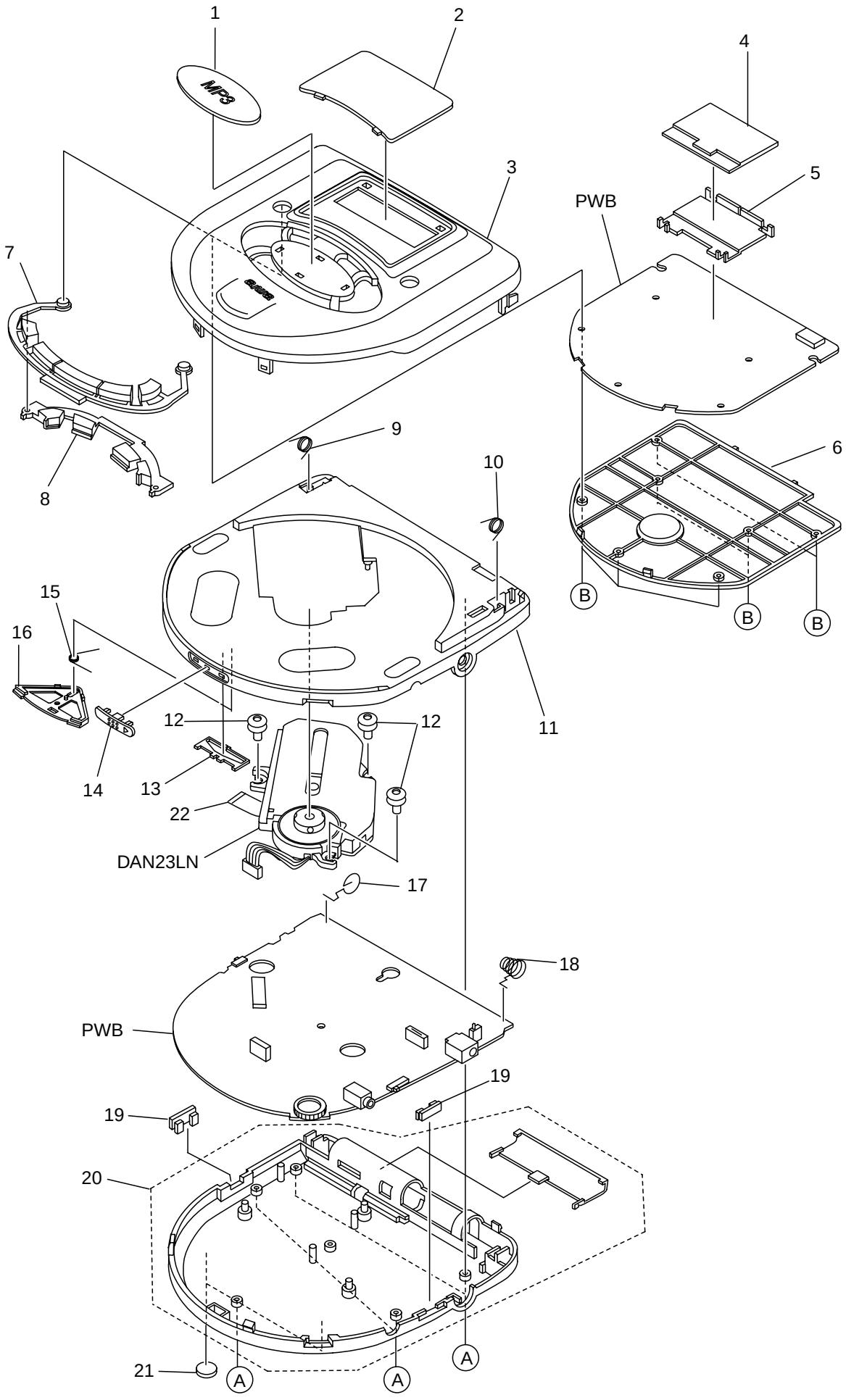
Pin No.	Pin Name	I/O	Description
1	VDD	–	Digital power supply
2	XRST	I	System reset. Rest at “L”.
3	MUTE	I	Muting input. Mute at “H”.
4	DATA	I	Serial data input from CPU
5	XLAT	I	Latch input from CPU. Latched at falling edge.
6	CLOK	I	Serial data transfer clock input from CPU
7	SENS	O	SENS output. Output to CPU.
8	SCLK	I	SENS serial data read clock input
9	ATSK	I/O	Input/output for antishock
10	WFCK	O	WFCK output (Not used)
11	XUGF	O	XUGF output. MNT0, RFCK output by switching command. (Not used)
12	XPCK	O	XPCK output. MNT1 output by switching command. (Not used)
13	XROF	O	CFS output. MNT2, XROF output by switching command (Not used)
14	C2PO	O	C2PO output. MNT3, GTOP output by switching command.
15	SCOR	O	“H” is output when either subcode sync S0 or S1 is detected.
16	C4M	O	4.2336 MHz output. At CAV-W mode or when variable pitch, 1/4 division of V16M is output (Not used)
17	WDCK	O	Word clock output. F = 2Fs. GRSCOR is output by switching command (Not used)
18	GND	–	Digital GND
19	COUT	I/O	Input/output of track number count signal
20	MIRR	I/O	Input/output of mirror signal (Not used)
21	DFCT	I/O	Input/output of defect signal (Not used)
22	FOK	I/O	Input/output of focus OK signal (Not used)
23	PWM1	I	External control of spindle motor input
24	LOCK	I/O	GFS is sampled at 460 Hz. “H” is output when GFS is “H”, “L” is output when GFS is “L” eight times consecutively. Input when LKIN = “I” (Not used)
25	MDP	O	Servo control of spindle motor output
26	SWIL	I	Innermost perimeter of disc detecting signal input.
27	FSTO	O	2/3 division of XTAI pin output (Not used)
28	VDD	–	Digital power supply
29	SFDR	O	Sled drive output
30	SRDR	O	Sled drive output
31	TRDR	O	Tracking drive output
32	TRDT	O	Tracking drive output
33	FFDR	O	Focus drive output
34	FRDR	O	Focus drive output
35	GND	–	Digital GND
36	TEST	I	Testing pin . Normally GND.
37	TEST1	I	Testing pin . Normally GND.
38	VC	I	Middle point voltage input. VDD/2.
39	FE	I	Focus error signal input
40	SE	I	Sled error signal input

Pin No.	Pin Name	I/O	Description
41	TE	I	Tracking error signal input
42	CE	I	Middle point servo analog input
43	RFDC	I	RF signal input
44	ADIO	O	Testing pin (Not used)
45	AGND	–	Analog GND
46	IGEN	I	Constant current input for OP amplifier
47	AVDD	–	Analog power supply
48	ASYO	O	EFM full swing output “L” = VSS, “L” = VDD
49	ASYI	I	Asymmetry comparator voltage input
50	RFAC	I	EFM signal input
51	AGND	–	Analog GND
52	CLTV	I	VCO1 control voltage for multiplication input
53	FILO	O	Filter output for master PLL (slave = digital PLL)
54	FILI	I	Filter input for master PLL
55	PCO	O	Charge pump output for master PLL
56	AVDD	–	Analog power supply
57	BIAS	I	Asymmetry circuit constant current input
58	VCTL	I	VCO2 control voltage input for wideband EFM PLL
59	V16M	I/O	VCO2 oscillation output for wideband EFM PLL. Switching by command inputs clock for wideband EFM PLL (Not used)
60	VPCO	O	Charge pump output for wideband EFM PLL
61	VDD	–	Digital power supply
62	ASYE	I	Asymmetry circuit ON/OFF, “L” = OFF, “H” = ON
63	MD2	I	Digital-out ON/OFF control. “L” = OFF, “H” = ON
64	DOUT	O	Digital-out output pin (Not used)
65	LRCK	O	D/A interface. LR clock output. f = Fs
66	PCMD	O	D/A interface. Serial data output. (2's COMP, MSB first)
67	BCK	O	D/A interface. Bit clock output.
68	EMPH	O	“H” is output when emphasis is present on a playback disc. “L” is output when emphasis is absent. (Not used)
69	XTSEL	I	Crystal selection input pin.“L” when crystal is 16.9344 MHz, and “H” when crystal is 33.8688 MHz.
70	GND	–	Digital GND
71	XTAI	I	Crystal oscillating circuit input pin. This is used for inputting a master clock from the exterior.
72	XTAO	O	Crystal oscillating circuit output pin
73	SOUT	O	Serial data output in servo block (Not used)
74	SOCK	O	Serial data read clock output in servo block (Not used)
75	SOLT	O	Serial data latch output in servo block (Not used)
76	SQSO	O	Sub Q80 bit and PCM peak level data output. CD TEXT data output.
77	SQCK	I	Clock for SQSO read-out input
78	SCSY	I	Input for re-synchronizing GRSCOR
79	SBSO	O	Serial output of Sub P-W(Not used)
80	EXCK	I	Clock for SBSO read-out input

Pin No.	Pin Name	I/O	Description
1	AGNDC	I/O	Analog reference voltage
2	AVSS1	I	VSS 1 for audio back-end.
3	AVSS0	I	VSS 0 for audio output amplifiers.
4	NC	–	Not used
5	OUTL	O	Audio output: Headphone left or speaker +
6	NC	–	Not used
7	OUTR	O	Audio output: Headphone right or speaker –
8	NC	–	Not used
9	AVDDO	I	VDD 0 for audio output amplifiers
10	AVDDI	I	VDD 1 for audio back-end
11	NC	–	Not used
12	XTI	I	Quartz oscillation pin 1
13	XTO	I/O	Quartz oscillation pin 2
14	CLKO	O	Clock output
15	SCL	I/O	I^2C clock
16	SDA	I/O	I^2C data
17	VSS	–	Digital VSS
18	VDD	–	Digital VDD
19	MCS1	I	I^2C chip select 1
20	MCS2	I	I^2C chip select 2
21	DEECTRL	I	Deemphasis ON/OFF control
22	NC	–	Not used
23	CLI	–-	I^2S bit clock
24	DAI	I	I^2S data
25	WSI	I	I^2S frame identification
26	$\overline{\text{PORQ}}$	I	Power-on reset, active-low
27	TESTEN	I	Test enable
28	NC	–	Not used
29	AUX2L	I	AUX2 left input for external analog signals (e.g. tape)
30	AUX2R	I	AUX2 right input for external analog signals (e.g. tape)
31	AUX1L	I	AUX1 left input for external analog signals (e.g. FM)
32	AUX2R	I	AUX1 right input for external analog signals (e.g. FM)
33	NC	–	Not used
34	DEEML	O	Deemphasis network left
35	DEEMR	O	Deemphasis network right
36	NC	–	Not used
37	FOUTL	O	Output to left external filter
38	FOPL	I/O	Filter op amp inverting input, left
39	FINL	I/O	Input for FOUTL or filter op amp output (line out)
40	NC	–	Not used
41	FOUTR	O	Output to right external filter

Pin No.	Pin Name	I/O	Description
42	FOPR	I/O	Right filter op amp inverting input
43	FINR	I/O	Input for FOUTR or filter op amp output (line out)
44	VREF	I	Analog reference ground

MECHANICAL EXPLODED VIEW 1/1



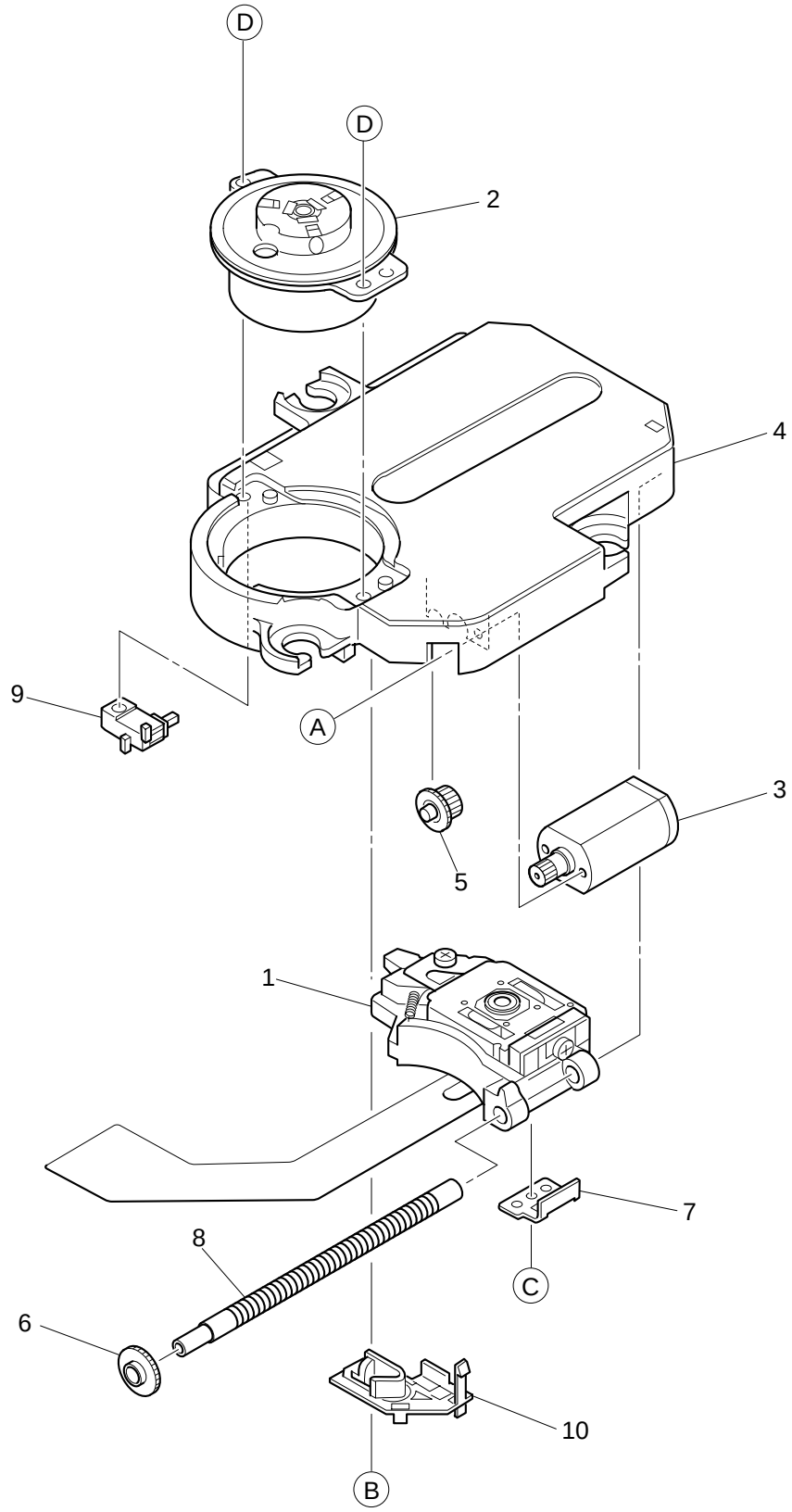
MECHANICAL MAIN PARTS LIST 1/1

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-HP1-009-010		PANEL,LID CD
2	8A-HP1-007-010		WINDOW,DISPLAY<AEZ>
2	8A-HP1-018-010		WINDOW,DISPLAY MP3C<AU>
3	8A-HP1-001-010		LID,CD
4	8A-HP1-609-010		LCD,AHP-1
5	8A-HP1-202-010		GUIDE,LCD
6	8A-HP1-008-010		HLDR,PWB LID
7	8A-HP1-005-010		KEY,PLAY
8	8A-HP1-006-010		KEY,MODE
9	8A-HP1-205-010		SPR-T,LID(L)
10	8A-HP1-206-010		SPR-T,LID(R)
11	8A-HP1-002-010		CABI,CENTER
12	8Z-HC1-225-010		DMPR,MECHA(SP)
13	8Z-HC1-202-010		LEVER,OPEN
14	8Z-HC1-009-010		KNOB,SL OPEN
15	8Z-HC1-220-010		SPR-T,OPEN-S
16	8Z-HC1-201-010		HLDR,KNOB
17	8A-HP1-203-010		BAT-CONTACT,(+)
18	8A-HP1-204-010		BAT-CONTACT,(-)
19	8A-HP1-012-010		KNOB,SL HOLD
20	8A-HP1-004-010		CABI ASSY,BOTTOM
21	8Z-HC4-027-010		FOOT,DIA10
22	8A-HP1-011-010		LID,BAT
23	8A-HP1-606-010		FF-CABLE,20P 0.5 78MM
A	87-067-869-010		V+1.7-8 SWCH/ZN BLK HL
B	87-067-384-010		VT2+1.4-3.5 SWCH HL

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow	DM	Metallic Orange	PT	Transparent Pink
LA	Aqua Blue	GL	Light Green		

MECHANISM EXPLODED VIEW 1/1 <DA23LN>



MECHANISM MAIN PARTS LIST 1/1 <DA23LN>

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S0-A41-A20-604		PICKUP ASSY LASER P200L
2	S0-M10-A10-800		MOTOR SPINDLE ASSY
3	S0-M10-A10-900		MOTOR SLED ASSY
4	S2-311-A12-200		CHASSIS
5	S2-511-A23-200		GEAR MIDDLE
6	S2-511-A23-100		GEAR,SCREW
7	S2-511-A23-400		GEAR,RACK
8	S2-511-A07-901		SPINDLE SCREW
9	S4-S13-A00-200		SW,LEAF
10	S2-451-A18-100		HOLDER GEAR
A	SS-EXE-A04-000		SCR PAN PCS 1.4-2.2
B	SS-GXE-A00-301		SPECIAL SCREW M1.7-6.0
C	SS-EXE-A14-100		SPECIAL SCREW
D	SS-GXE-A00-202		SPECIAL SCREW M1.7-4.0

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